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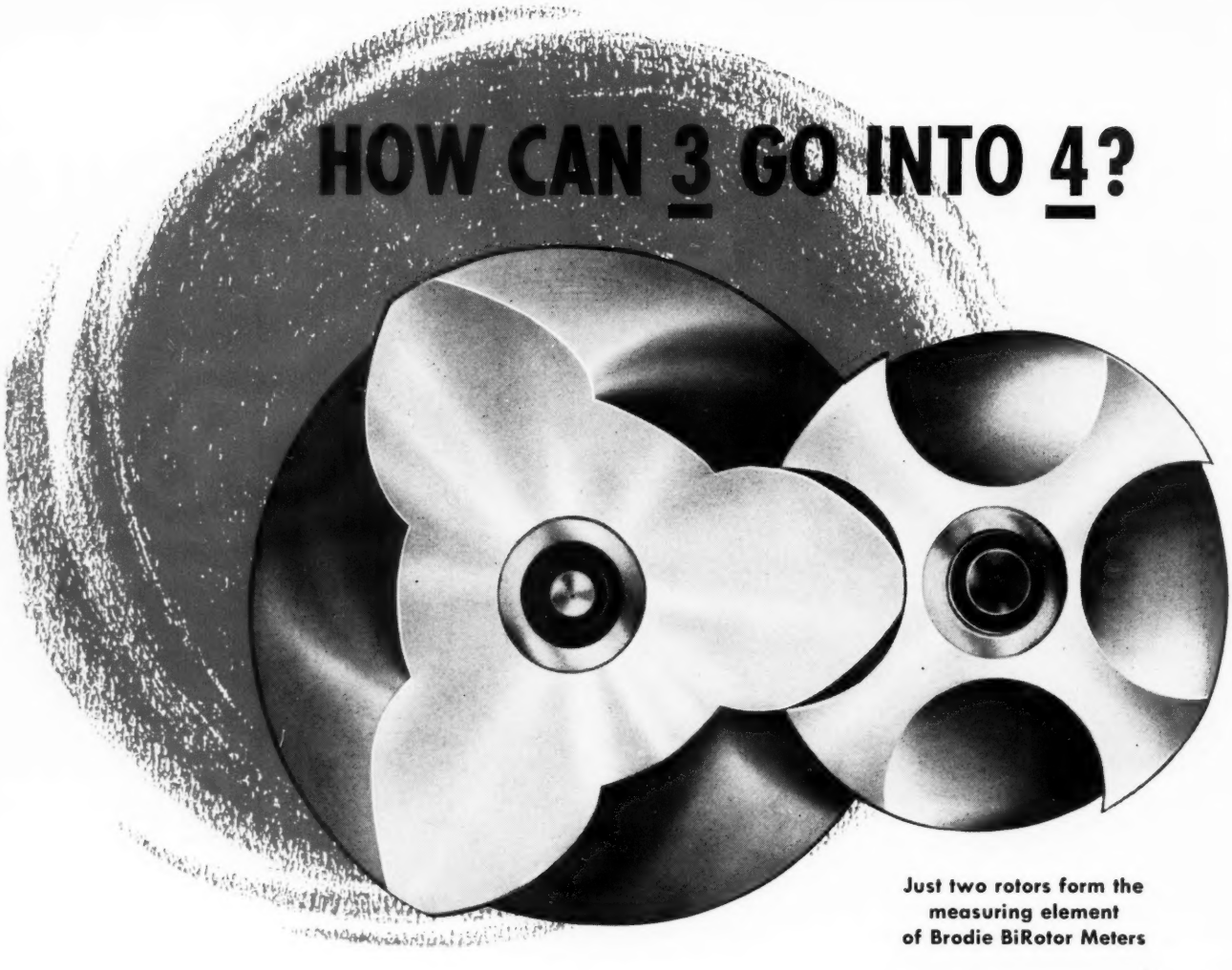

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VOL. 9, NO. 3

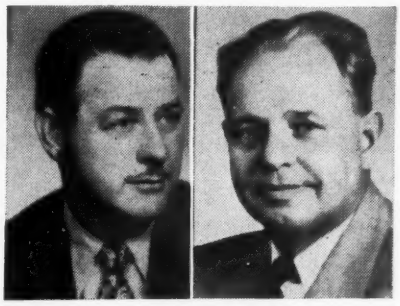
fueloil & oil heat

MARCH

1950

Names in the News

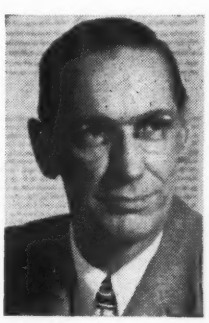
Howard J. Ferris has been named general sales manager and *Allan Davis*, regional sales manager for the southeastern section, Kresky Mfg. Co., Inc.,



Ferris **Davis**

Petaluma, Calif. Mr. Ferris, whose appointment was made on January 1, formerly was assistant director of sales, Day & Night Div., Affiliated Gas Eqpt. Co. He now is formulating plans and policies for further expansion of national sales of Kresky's complete line of oilfired heating equipment. Mr. Davis will maintain headquarters at St. Petersburg, Fla. and has been with Kresky since 1943 as a factory representative.

Arthur C. Wales has been named field training director, Institute of Boiler and Radiator Manufacturers, New York 17, N. Y. He will supervise and conduct schools dealing with the installation of hot water and steam heating systems. Formerly with the New England Technical Institute, Mr. Wales enjoys a wide experience as a teacher of heating subjects and in practical engineering work in the field. I-B-R schools are to be scheduled one each week in different cities through the country, each school to be of three-day's duration, with the course based primarily on I-B-R Installation Guides. In addition to affording information on calculating and design-



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COVER PHOTO: McConaughy Terrace, housing development of the Housing Authority of New Haven, Conn. An article describing the oil distribution system, supplying oilfired dwelling units in the project, begins on page 63.

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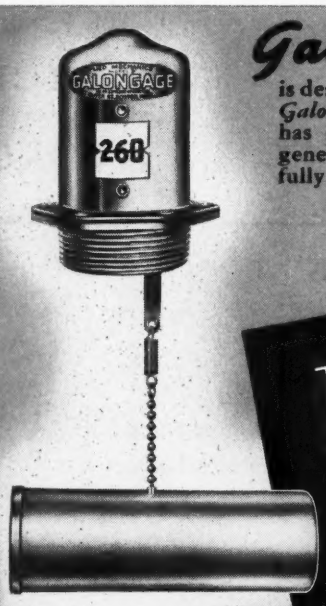
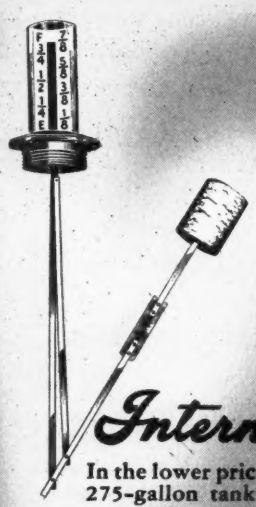
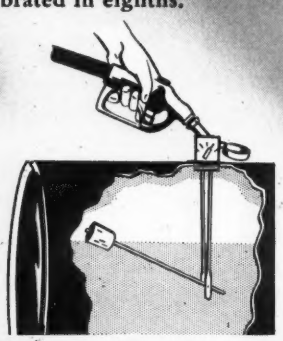


Galongage Outstanding in the field, it is designed to meet the most exacting requirements. *Galongage* does credit to the finest installation and has strongest consumer appeal. The only gauge generally used that measures in gallons. Comes fully assembled . . . quick and easy to install.

Reliable Accurate Easy to Install



International In the lower priced field, also for 275-gallon tanks. Best of lever arm type gauges. Built oil-tight at the factory with flexible float-arm, it is ready for immediate installation. Extra large, easy-to-read numbers on aluminum dial calibrated in eighths.



Fil-thru For 55-gallon oil drums. Gauge, vent and fill-pipe all in one. Installed without tools of any sort. With FIL-THRU user knows at a glance when to order and fill man can tell how much is required. Rugged, rainproof and non-corrosive. Clean and convenient for consumer and oil man.

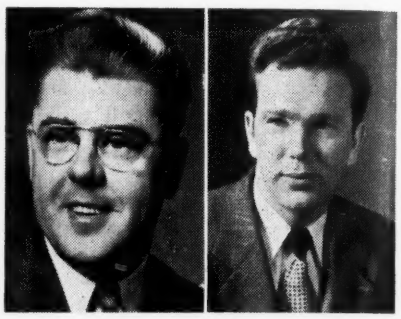
A WINNING TEAM THAT TOPS THEM ALL

Whether it's for the finest installation or a 55-gallon drum, we have the fuel oil gauge to do the job *better.* Here's a *team* designed to give you customer satisfaction and top performance with economy and efficiency. Write for complete details.

APPLIED MECHANICS COMPANY
167 OLIVER STREET, BOSTON 10, MASSACHUSETTS

ing various types of residential systems, the course also will discuss merchandising aspects.

Harold M. Greene and *Robert H. Brethen* have been named zone representatives, Delco Appliance Div., General Motors Corp., Rochester, N. Y. Mr. Greene, with headquarters in



Greene Brethen

Unionville, Ohio, will operate in the Cleveland area. He formerly was active in heating and air conditioning retailing and has been associated with Minneapolis-Honeywell Regulator Co. Mr. Brethen's territory will encompass the Pittsburgh area. He has been with Delco since July 1949 as a sales trainee, under which program he underwent six months training in the sales, engineering and production divisions of the company.

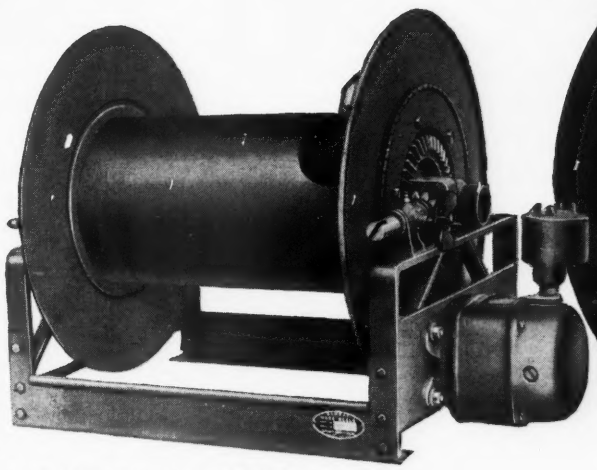
George C. Jelliffe is eastern district manager, Ilg Electric Ventilating Co., Chicago, with headquarters at 15 Park Row, New York City.

Fred E. Lewin, vice president, has advanced to the position of executive vice-president, Ralph B. Carter Co., Hackensack, N. J., manufacturers of a line including pumps for oil field use.

Johnson Roney II on January 1 became Florida representative, Black, Sivalls and Bryson, Inc., Kansas City 6, Mo. He is handling safety heads and related products.

A. C. "Gus" Schroeder, old-timer and well-known in the oilheating industry, died at his home in Woodridge, N. J., on February 2. Cause of death was believed to be a heart attack. He was best known for his association with Silent Glow Oil Burner Corp., whom he represented in the metropolitan New York area for many years. The funeral was held on February 4 at Milburn, N. J. Mr. Schroeder is survived by his wife, Pauline.

NEW . . . the HANNAY HOSE REEL* with Explosion-Proof ELECTRIC MOTOR



REDUCES HAZARDS in handling inflammables and volatiles

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OTHER PATENTS PENDING

- **Especially designed explosion-proof heavy duty motor, Underwriters Approved Class 1, Group D, with permanently lubricated bearings. Motor an integral part of reel; needs no attention.**
- **Can be connected through conduit, for sealed, safe installation.**
- **Sealed push button control; "push" to start; "release" to stop.**
- **Quiet, positive sprocket and chain drive; no gears to shift; no clutch to engage.**
- **Safe rewind speed, always under control.**
- **Smartly designed, compact, durable, dependable.**
- **Simplicity of construction and operation reduces maintenance costs to a minimum.**

AT LAST . . . a new hose reel with truly *explosion-proof* electric motor, developed by Hannay especially to overcome the danger factors previously associated with electrical rewinds. Particularly advantageous for use in fuel oil, gasoline, chemical, fire fighting and similar installations . . . PROVEN SAFE and efficient in exhaustive factory and field service tests. Now available for truck installations in all models except Hannay "16-17" and "14-17" series, in practically every voltage in A.C. or D.C. Ask your dealer for demonstration . . . or write for complete information.

HANNAY
REG. U. S. PAT. OFF.
HOSE REELS
CLIFFORD B. HANNAY & SON, INC.
WESTERLO, NEW YORK

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Editorial Leaks

Agitation in some quarters of the industry is starting for a federal tax on natural gas. It is felt that such a tax would so increase the price to the consumer that fueloils would be less affected by gas competition. Such a proposal to a tax-hungry administration is believed to have a better than average chance of adoption at this time.

Such a suggestion is first cousin to the plan to burn the house to get rid of the termites. It is inviting an insidious type of infection into the body of the heating business, and expecting its ravages can be confined to one member.

For years we have seen the coal country statesmen toss oil tax bills into the legislative hopper at the start of every Congressional session. These bills were so obviously discriminatory and "protective" that only twice have they been seriously considered by Congress. On those occasions we screamed loudly and long against such shenanigans by a small and selfish group, and defended the God-given right of the American people to choose their favorite fuel without the penalty of a discriminatory tax. We believed it then, and we believe it now.

This industry—and this country—needs fewer taxes instead of more. It needs less "help" from government; less meddling by successful ward-heelers in high places. Governmental "help" is too expensive. Neither this industry nor the country can stand much more of it, and this is certainly late enough to start refusing any part of it. We are trying to make subsidies and little protective tariffs take the place of work and constructive selling. The coal people now are out of competition in the domestic heating business because they spent too much time fighting against oil and too little selling coal. The oilheating industry is in danger of the same fate.

We believe natural gas is underpriced. We believe it is getting an industrial subsidy from the petroleum industry that is uneconomic and shameful. Gas now is selling in the field for something under a quarter of its true value, while fueloils are carrying their full share of the cost of oil discovery, production, refining, transportation and marketing. But by the ghost of the Blue Eagle, we do not want more government planners "helping" us with our economic problems. We want gas producers to get a fair price for the product they sell and use the proceeds of their sales to find more oil—and gas. More taxes and more "relief" for the oilheating business will only heighten the barrier between us and our market.

The day this industry files its application for home relief with the industrial welfare department, it has admitted its unwillingness or inability to work. It has shouted "Uncle" for all the business community to hear. It has admitted defeat and demonstrated its lack of imagination, virility and ability. It will never do an honest day's work again.

More taxes are not the answer to the problems of the oilheating industry. We need more guts. We need more of the audacity of that handful of inventors and businessmen who, thirty years ago, took an unknown, untried and unwanted oilburner to the public and made that reluctant public buy it. We need to revive the determination of that tired, dirty, young fellow who pushed his limping truck through snow drifts to build a fueloil business for himself. We need the hope and faith of the girl who put her children to bed and spent half the night keeping books and figuring costs.

We need more of the raw courage that sold and supplied four-and-a-half million oilburners; more than half of them during the worst periods of man-made poverty and scarcity the country ever has seen. The job is less than half done. There is more market ahead of this industry than behind it. There is the prospect of better economic climate for the last half of the job than for the first half. In spite of this outlook it is being suggested that we go whimpering to Washington, begging politicians to tax us out of work.

There is no substitute for selling. No tax on natural gas, coal or electricity will make the public want fueloil. Those who think they want gas may defer buying until they can afford to buy it and pay the taxes, but they will not want fueloil. Only constructive selling ever will make people buy oilheat, and only continued selling will make them keep it. Substitutes and palliatives will not build our market.

◈

If any example is needed of the constant struggle to get government to bail industry out of self-imposed bankruptcy, we need go no further than the Concurrent Resolution 151, calling for a Joint Committee on Fuel Policy. This high-sounding committee is the brainchild of Congressman Ivor D. Fenton, a Pennsylvania statesman, who feels an investigation is necessary to prove "the necessity for remedial legislation and a national fuels policy."

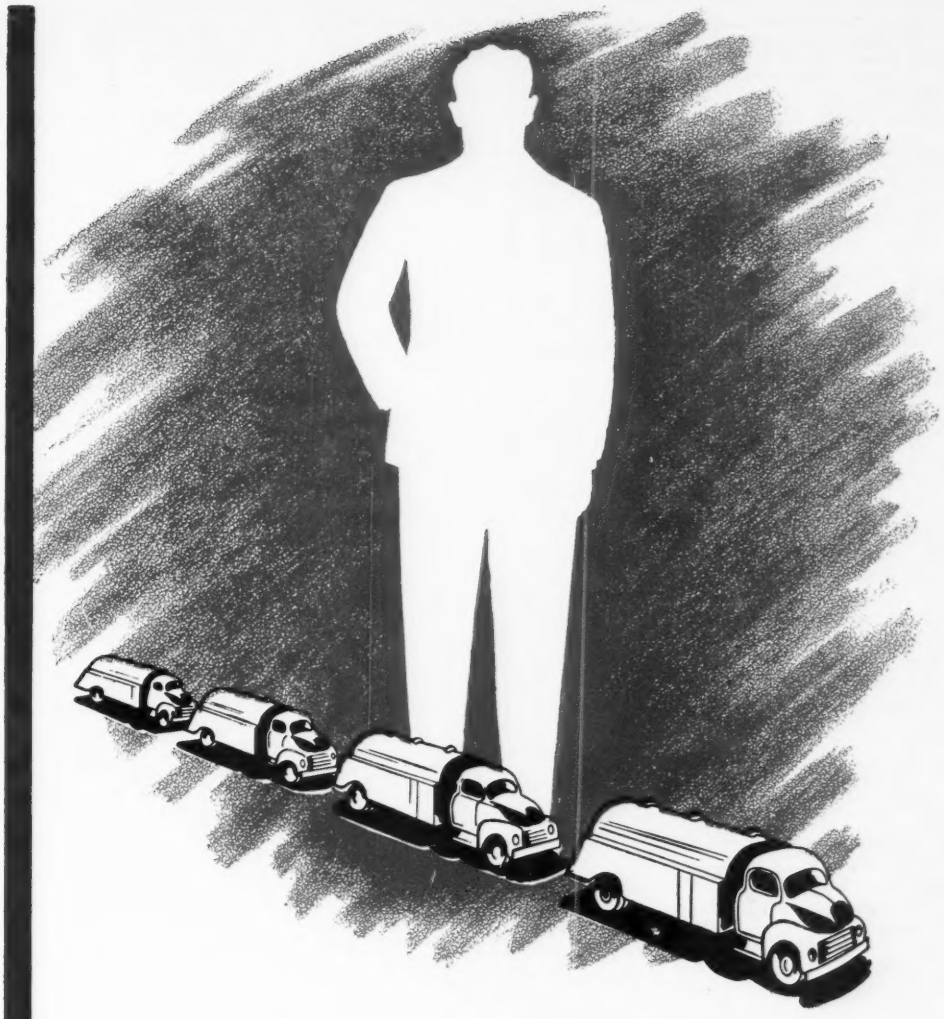
Representative Fenton reveals the true motive behind his great concern for the national welfare by telling the Congress what its committee will find: (1) an incipient oil shortage; (2) a needless waste of oil and gas; (3) danger of war cutting off imports; (4) great cost of synthetics, except from natural gas; (5) abandoned coal mines; (6) danger to the railroads through a shortage of locomotives and rail cars if they are not needed to haul coal.

Though Representative Fenton is fearful of the years and great cost to get synthetic oil, he has no concern over the anguish and greater cost inherent in synthetic economics. He fears the vitality of competitive enterprise which he claims to love. He probably will deny favoring police state compulsion—except compulsion to use his state's coal. All this, of course, is suggested in the holy name of national "welfare," and thereby gains priority over facts, reason and basic economics.

Some of coal's problems arise from government meddling in the past. They will not be solved, or national welfare served, by more meddling in the future.

Oilheating men, looking for support in Congress for a tax on natural gas, probably can count on Congressman Fenton and the Pennsylvania delegation. Undoubtedly they will support any such punitive measure. With the help of the fueloil industry, they will be glad to tax gas,—at least!

MEN OF DECISION



In every company there are Men of Decision — men who have the final say about company policy and action.

They have learned to face facts squarely, weighing one against the other — all with an open mind. And theirs is the ability to follow this review of facts with the decision that means profit and progress for their company.

They are busy men. Too busy sometimes to personally gather all the facts necessary for a decision. Teamwork is needed. Make certain that your Men of Decision know all the facts on your present fuel oil delivery costs; and how these costs can be cut 15% to 30% by equipping all fuel oil accounts with VENTALARM® Tank Fill Signal.

Write today for exciting facts about what the VENTALARM decision has meant to more than 3500 fuel oil dealers all over the country. Address inquiries to:

SCULLY SIGNAL COMPANY, 76 First St., Cambridge 41, Mass.

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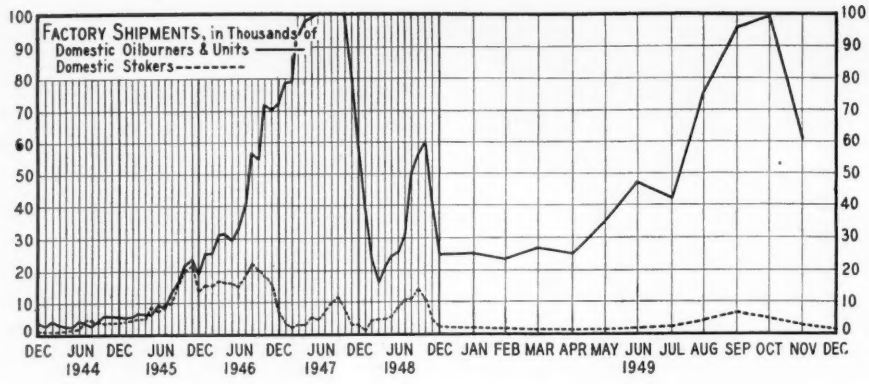

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1944 1945 1946 1947 1948 1949

Shipments of Oilburners and Units
(Including Exports)

Adjusted to include manufacturers other than the 152 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	NOVEMBER			ELEVEN MONTHS		
	1949	1948	Percent Change	1949	1948	Percent Change
Conversion	44,328	27,551	+ 60.9	423,698	269,022	+ 57.5
Boiler units	6,104	3,761	+ 62.3	50,798	36,106	+ 40.7
Furnace units	10,530	8,265	+ 27.4	89,248	81,312	+ 9.8
All Domestic	60,962	39,577	+ 54.0	563,744	386,440	+ 45.9
Commercial	2,554	2,198	+ 16.2	23,739	26,085	— 9.0
Total	63,516	41,775	+ 52.0	587,483	412,525	+ 42.4

	DECEMBER			TWELVE MONTHS		
	1949	1948	Percent Change	1949	1948	Percent Change
Conversion	29,793	18,807	+ 58.4	445,966	287,829	+ 54.9
Boiler units	4,002	2,081	+ 92.3	54,652	38,187	+ 43.1
Furnace units	7,052	5,531	+ 27.4	96,674	86,843	+ 11.3
All Domestic	40,847	26,419	+ 54.6	597,292	412,859	+ 44.6
Commercial	2,212	2,348	— 5.8	25,736	28,433	— 9.5
Total	*43,059	*28,767	+ 49.6	*623,028	*441,292	+ 41.1

*Revised totals.

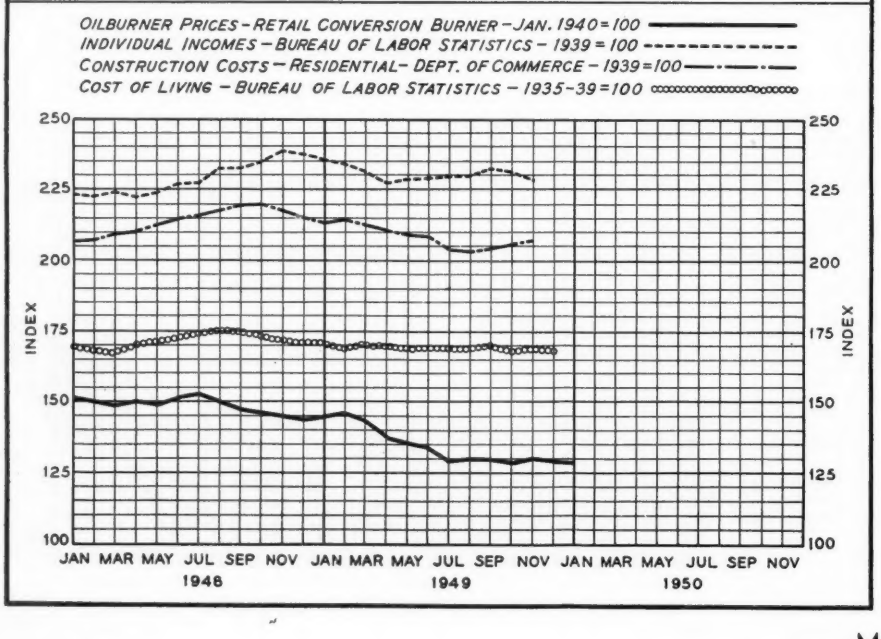
January Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
January Aver.	$310	$649	$560
December Aver.	313	666	564

Price Index: Conversion Burners: January 1940 is 100%

	WHOLESALE				RETAIL			
January	127.6	Six months ago	129.2		January	127.9	Six months ago	129.6
December	128.2	Year ago	138.3		December	129.4	Year ago	145.2

OILBURNER PRICES COMPARED TO GENERAL INDEXES


OILBURNER PRICES - RETAIL CONVERSION BURNER - JAN. 1940 = 100
INDIVIDUAL INCOMES - BUREAU OF LABOR STATISTICS - 1939 = 100
CONSTRUCTION COSTS - RESIDENTIAL - DEPT. OF COMMERCE - 1939 = 100
COST OF LIVING - BUREAU OF LABOR STATISTICS - 1935-39 = 100
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1948 1949 1950

Oilheating Trends

PRELIMINARY ESTIMATES of installations of domestic oilburners and units in January are 32,579, or virtually the same as in December and 8% above the estimated 30,158 for January a year ago.

The January installations were divided: New homes 12,445; Replacements of old oilburners 8,047; Conversions from other fuels 12,087. This is a typical mid-winter pattern. It is difficult to get people to convert from one fuel to another during the coldest month of the year with the result that burner salesmen put special emphasis on replacements. New homes sales, while not stimulated by cold weather, represent a more important share of the total because of the decline in conversions.

BURNER STOCKS: Dealer stocks of domestic oilburners and units at the end of January are estimated at 53,387, showing little change from either of the two previous months. With January at the bottom of the normal sales curve, and with dealers not looking for price increases it would appear that the present stock figure is about the practical minimum under current economic conditions. Factory stocks at the end of November, the latest available data, were 33,268, representing a slight rise from the extreme low point of October.

COMBINATION OIL-GAS BURNERS: We received a request to check the probable volume of sales of this equipment, so dealers were asked about combination burners. It is difficult to get a clear estimate since a good many of these burners are sold through contractors and engineering firms that would not be reporting to the oilheating industry. Taking these factors into account a rough estimate would be that there were installed in 1949 about 700 domestic, and about 1,630 commercial combination burners. Among all reporting dealers 31% say that someone in their market installed one or more combination burners during the year.

COMBUSTION BAFFLES: This is another item on which we had been asked by dealers to make a check. About 27% of the reporting dealers say that they have used stainless steel combustion baffles above the burner in round steel boilers or furnaces . . . which was the way the question was asked. About one

in sixteen of the dealers using this equipment make it themselves and the others buy it ready made.

AUTOMATIC DELIVERIES: A fueloil distributor had requested that we ask of the reporting group how they handle automatic deliveries in early fall to prevent bunching up. There were a lot of good answers on this but they are much too long to include here so they will appear in the March issue of the magazine.

FUELOIL STOCKS: The mild winter particularly in the Eastern states has again caused stocks to accumulate as they did last season, and also caused some fractional price declines at the retail level and a soft market at the wholesale. On February 4, the latest available information, distillate fueloil stocks East of the Rockies were 51,562,000 barrels compared with 51,301,000 on February 5, 1949. Back in 1948 on a corresponding date there had been only 25,554,000 and in 1947 33,932,000. These violent fluctuations caused by weather are giving the oil industry a great deal of concern now that heating oil has become a big slice of the barrel.

STOKERS: The domestic stoker business appears to be falling apart completely. The final figures on factory shipments for 1949 show only 31,680 stokers sent out during the year including classes 1 and 2, or the range up to 100 pounds per hour. This range embraces domestic and small commercial stokers. The 1949 shipments represent a drop of 62% from the 83,399 shipped in 1948, and a drop of 84% from 1946, the industry's best postwar year when shipments were 197,719. The coal industry has plenty of problems and one of them is to find some form of automatic firing more acceptable to the public than stokers. Converting the solid fuel to some type of fluid fuel at the mines is no doubt the long range solution, but there is not much activity in that direction on a commercial scale at present. Meanwhile, pressure is building up to get government to force the use of coal in commercial and industrial applications to save the industry.

Oilburner* and Building Permits

OILBURNERS					DWELLINGS			
January		12 MONTHS			January		12 MONTHS	
1950	1949	1949	1948		1950	1949	1949	1948
41	29	698	..	Albany, N. Y.	..	..	..	..
517	128	6173	2720	Baltimore, Md.	221	20	2885	5761
..	..	..	..	Binghamton, N. Y.	..	12	106	141
..	..	..	..	Bloomfield, N. J.	7	1	81	97
..	366	6344	..	Boston, Mass.	32	6	348	297
73	99	1065	1051	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	..	18	431	327
..	..	..	..	Des Moines, Ia.	26	10	1213	905
..	908	6011	..	Detroit, Mich.	1109	182	12064	6645
41	53	597	447	Elizabeth, N. J.	12	4	54	21
16	14	379	..	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	25	7	240	270
..	..	..	..	Hackensack, N. J.	27	0	56	42
225	119	1066	1373	Hartford, Conn.	..	..	..	..
..	..	..	..	Hudson County, N. J.	..	..	..	..
16	6	340	188	Irvington, N. J.	0	0	25	47
..	..	..	..	Lynn, Mass.	14	6	204	181
70	6	448	..	Meriden, Conn.	..	..	..	..
185	256	3769	2136	Milwaukee, Wisc.	150	61	2324	1862
95	84	1216	1316	Minneapolis, Minn.	48	33	1898	1320
12	12	261	229	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	..	..	..	..
28	19	447	266	Mt. Vernon, N. Y.	..	..	..	..
68	49	1782	..	Newark, N. J.	..	..	..	..
103	72	689	845	New Bedford, Mass.	..	..	..	..
30	43	763	..	New Haven, Conn.	..	..	..	..
..	..	..	0	New Orleans, La.	..	..	..	..
33	11	322	139	New Rochelle, N. Y.	6	0	60	106
2247	1747	27364	21889	New York City (total)	..	..	..	..
1601	1331	21146	17418	Brooklyn-Queens	..	..	..	..
646	416	6218	4471	Manhattan, Bronx, Rchd	..	..	..	..
61	73	1947	1331	Norfolk, Va.	81	32	841	585
..	0	..	11	Oakland, Calif.	..	..	..	..
57	59	1628	1151	Omaha, Neb.	..	7	716	745
4	8	206	163	Orange, N. J.	0	0	9	25
6	11	318	239	Passaic, N. J.	..	..	..	..
25	16	768	519	Paterson, N. J.	8	1	123	107
508	345	10731	6305	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	14	2	142	97
24	22	402	376	Portland, Me.	6	2	138	153
260	404	6226	5024	Portland, Ore.	94	128	2209	..
11	10	265	207	Poughkeepsie, N. Y.	..	..	..	..
64	50	674	620	Providence, R. I.	13	5	185	179
..	..	..	..	Reading, Pa.	9	3	65	40
76	114	1079	839	Richmond, Va.	58	57	676	873
89	..	..	..	Roanoke, Va.	..	..	..	..
99	144	2426	1620	Rochester, N. Y.	..	..	..	..
22	29	281	330	Rockville Center, N. Y.	6	0	114	200
30	21	376	279	Salem, Mass.	3	3	94	120
..	107	..	1631	St. Louis, Mo.	37	7	598	476
129	161	2157	1632	St. Paul, Minn.	18	4	834	..
85	37	567	737	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	114	81	1690	..
..	..	..	..	Springfield, Mass.	16	15	562	503
96	51	575	447	Stamford, Conn.	..	..	..	..
17	61	668	..	Syracuse, N. Y.	32	15	355	..
..	..	..	..	Trenton, N. J.	1	1	70	31
..	..	..	..	Utica, N. Y.	3	1	85	132
124	115	1426	1791	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	11	4	189	150
12	8	279	227	White Plains, N. Y.	6	19	108	79
70	51	1139	..	Wilmington, Del.	7	0	103	128
104	132	1629	..	Worcester, Mass.	..	..	..	..
23	17	655	322	Yonkers, N. Y.	..	..	..	..
7954	6432	103659	78647	*Totals*	2168	710	26807	22645
+23.7		+31.8		*Percent Change*	+20.5		+18.4	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

Fueloil Inventory Gains In California

PETROLEUM INVENTORIES in California increased sharply in 1949 as a result of a sharp decline in demand for fueloil products. The gain in storage was 22,457,000 to 129,352,000 barrels.

This flush condition was reflected in price changes which, within the year dropped light crude 16 cents per barrels on 25 deg. gravity grade, while fueloil went from $2.18 to $1.13 between September 2 and December 31.

Total production of crude oil in California during 1949 was 332,884,000 barrels, compared with 340,074,000 barrels in the previous year, a difference of only 7,190,000 barrels. During the year daily production dropped to 870,000 barrels.

B. I.

leads the burner chorus

B. I. means BURNING INDEX. Developed by Atlantic Research, it is a rigid rating of furnace oil burning quality . . . helps maintain uniform, high-grade Atlantic Furnace Oil.

With **B. I.** to lead them, your customers' burners will sing a chorus of warmth and pleasure. They'll burn cleanly and evenly . . . without soot or smoke. Your customers will have steadier heat. And you'll have fewer complaints and lower service costs.

ATLANTIC FURNACE OILS

TERMINALS AT:

Providence, R. I.	Allentown, Pa.
New Haven, Conn.	Mechanicsburg, Pa.
Albany, N. Y.	Northumberland, Pa.
Binghamton, N. Y.	Philadelphia, Pa.
Buffalo, N. Y.	Reading, Pa.
Elmira, N. Y.	Williamsport, Pa.
Rochester, N. Y.	Wilmington, Del.
Syracuse, N. Y.	Baltimore, Md.
Newark, N. J.	Richmond, Va.
Trenton, N. J.	Wilmington, N. C.
Brunswick, Ga.	

The Atlantic Refining Company

REFINERIES AT PHILADELPHIA, PENNSYLVANIA; AND ATRECO, TEXAS

Light Season Deliveries

Dealers Tell How They Handle Degree Days in Warm Months

EACH MONTH a representative group of dealers throughout the country shares experiences with the industry by answering a list of questions for the "Oilheating Trends" section of the the magazine. Recently a number of those questions have been requested by dealers themselves, to get the group viewpoint. One last month asked if we would poll the reporting dealers on how they handle automatic degree-day deliveries in early Fall months to avoid run-outs and also to prevent bunching up. The representative answers selected were too numerous and long to include in the "Trends" section so are related here.

The names of the dealers are not given because it has always been a policy on these monthly surveys not to disclose the sources of answers, but we can locate them by geographic areas.

From New England

"We have little trouble because the constant K factor has such a variety; here are K factors on a group of cards lifted at random: 5.5—1.0—1.8—.5—2.8 — 2.6 — 5.0 — 2.5 — 2.6 — 2.0 — 4.0—2.2—1.7. On the first Fall delivery the type of account helps, whether or not having continuous hot water, and whether or not it had a late Spring delivery —these give us variety."

"A summer hot water degree-day is carried forward on the basis of the K factor set up for winter deliveries. The corrections are made on the daily mean temperature, similar to subtracting the mean from 65° in winter. This system prevents the usual jumble of hot water users and non-users in Spring and Fall."

* * * *

"About the first of September we earnestly solicit all of our accounts to fill up, providing they have not done so during the summer; this campaign usually brings in the stragglers. The drivers fill these on routes, so that when the season gets under way we have them all set for D-D deliveries."

* * * *

"When the heating season is finished on May 31 and your degree-day log is complete, plan to fill every tank during the month of June. When the cards are filed for Fall delivery, deduct between 100 and 200 degree-days to allow for occasional summer use (damp, rainy days). Since you are starting the Fall season with full tanks, there is no reason for deliveries to get bunched as you will find your cards are filed from 0 degree days to a possible maximum of 2,000 degree-days. This of course applies to oil used for heat only."

* * * *

"Deliveries should never bunch in the Fall. Hot water users can, of course, be figured on a 'gallons per day' basis. You thus know the amount in the tanks of these customers and the transition to degree-day delivery is simple. Non-hot-water users can be scheduled by computing amount used after last delivery in present heating season. These should be moved slightly ahead of time to allow for oil used by some on cool summer mornings. Bunching of stops is unnecessary because you can add to or subtract from the number of drops to be made each day. A few days either way will make little difference either in productivity or in customer morale."

* * * *

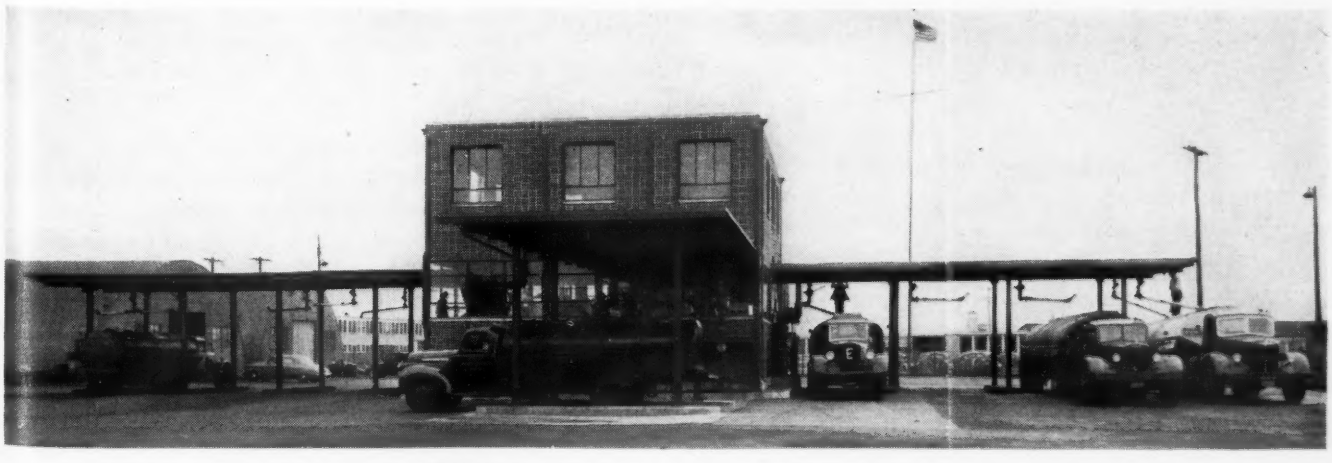
"We fill up all accounts within a certain radius and then move to another section. By the time all are filled the weather is cold enough to give us a fairly good degree-day control, needing a little more attention than in cold months."

* * * *

"First, fueloil for hot water use should be calculated and the delivery cards for this type of customer projected accordingly through the summer months. With the non-user of hot water proper adherence to the degree-day system is all that is essential to prevent bunching up."

* * * *

"It is impossible to have them bunched



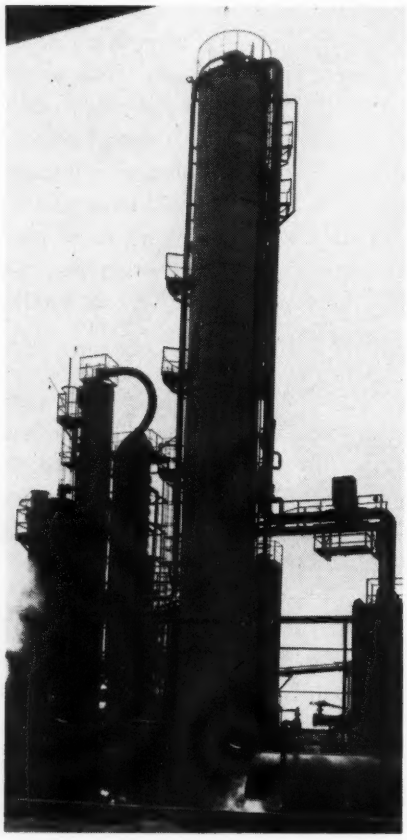
if you follow the degree-day system throughout 12 months. Most companies get in trouble in the summer by not figuring their domestic hot water on a degree-day basis." (Edit. Note: This type of operator is apparently saying, "Don't emphasize summer fill-ups unless the customer happens to need oil on the D-D controls.")

* * * *

"We use a route schedule and make the drops regardless of degree-days; all take some oil."

* * * *

"We were not able to make degree-



days work, so have gone back to a route system."

* * * *

"We use a minimum number of vehicles in the early Fall and do not deliver ahead of the accumulated degree-days."

* * * *

"We just keep up with degree-days, but move a little ahead on hot-water-using accounts to play safe."

* * * *

"We do not encounter this problem because when we are not busy we reach ahead taking those accounts not quite due. The average drop will decrease slightly."

From Mid-Atlantic States

"See to it that as many as possible customer tanks are filled in the Summer, even though this may mean occasional drops of less than 125 gallons. In the early Fall go through your cards and file them according to the K factors. To avoid bunching, schedule your deliveries about 100 degree-days ahead of the set time; this will take up the slack in the early Fall when the burners operate but an insufficient number of degree-days are recorded."

* * * *

"A degree day system notwithstanding, if a summer fill-up program is undertaken, nothing can be done to prevent bunching of cards for future deliveries. This company uses a system of 'weighted degree days' during the fringe months in the early Fall and late Spring when the actual consumption of fueloil is in excess of the actual degree-days accumulated. 'Weighted degree-days' are accumulated in addition to actual degree days as follows:

Mean Temperature	*Weighted Degree-Days*
65°-62°	4
61°-58°	3
57°-54°	2
53°-50°	1

"As an example—on a day when the mean temperature is 59, we would pick up 6 actual degree-days and 3 'weighted degree-days,' or a total of 9 'weighted degree-days' for the day. 'Weighted degree-days' are accumulated in the same manner as actual degree-days. In projecting our fueloil control cards the 'degree-days on date of delivery' are picked up from the 'weighted degree-days accumulation.' 'The degree-days of usable oil' appearing on our control cards is based on actual degree-days only. 'The degree-days—next delivery' is therefore the sum of 'weighted degree-days on date of delivery' plus degree-days of usable oil. Some slight bunching in the cards will appear even if no fill-up program is pursued and 'weighted degree-days' are used, however, this bunching is so slight that it causes no difficulty in Mid-winter operations."

* * * *

"We continue our degree-day records over the Summer and allow five degree-days per day for domestic hot water; this prevents Fall bunching."

* * * *

"During September we fill all of our

automatic delivery accounts, covering one town at a time. Then we sort of guess the number of degree-days for making the next delivery, and from then on we can't miss."

* * * *

"Based on experience, we pull the cards considerably ahead of the degree-day schedule; it is difficult to be accurate. Most of our run-outs occur in the early part of the season."

* * * *

"In early Fall we schedule deliveries every week or two weeks. Some are small but we have found no other way on account of the curious variations at this season."

* * * *

"We carry our degree-day system over the Summer, some with, some without hot water, and then we supply a number of dairies that use the oil for processing, thus spreading out our deliveries."

* * * *

"Based on experience, we stagger the deliveries at the start; then we have quite a lot of customers who get oil 'on order' and we call these and urge that they fill as we need more work."

* * * *

"We start the Fall with 100 gallon reserves on the deliveries and then work back as near as possible to 25 gallon reserves, thus taking up the slack."

From The Midwest

"First, our volume is only a half million gallons, so our methods probably wouldn't work with larger companies. We tried automatic deliveries but gave

them up, for we found that 76% of our customers called in anyway to be sure we were watching their supply. We now tell our accounts to phone us when the tank is one-fourth full, and frequently impress the idea. We had only two runouts last season."

* * * *

"Ours always do bunch in the Fall but soon adjust themselves as we have nearly 10,000 degree-days. In warm months we average only about 150 gallon drops but reach 200 gallons in the real winter."

* * * *

"With 50% of our accounts on automatic deliveries we try our best to get these filled in early Summer; then the non-automatic accounts help give us variation in the Fall."

* * * *

"We fill all tanks in the early Summer, explaining that this cuts down condensation. Then in the Fall we take our fill cards with the lowest limits after they start using oil and move up the scale until the degree-day system starts to work. We have a few small fills."

* * * *

"We use a degree-day system but don't make automatic deliveries. Instead, we notify the customer by postcard that he can take a normal delivery and should order it. With a variety of tank sizes, many of them large, this gives us flexibility to avoid bunching."

* * * *

"Fall deliveries could not possibly bunch up if at the end of the heating season the deliveries are calculated for the following Fall season just as though there were no Summer interruption. For example, delivery due at 7,600 D-D, and May 31 shows a total of 6,200; thus a delivery is due at 1,400 D-D in the next season. It looks to me that people get into trouble by trying to fill all tanks regardless of the D-D system."

From Pacific Northwest

"We start deliveries August 1 and then set up our budget accounts to stimulate early filling."

* * * *

"We measure all tanks as they come up for the first 400 or 500 degree-days, filling only those that will take a normal delivery and extending the others to a suitable delivery date."

"I'm not sure that we avoid bunching. Following is our distribution by months:

Month	*% of Total Annual Del'y*	*% of Consumers Actual Use*
Jan.	19%	18%
Feb.	14	16
Mar.	10	12
Apr.	8	9
May	4	5
June	3	2
July	3	0
Aug.	3	0
Sep.	6	2
Oct.	6	8
Nov.	8	12
Dec.	16	16 "

Plan For Record Turnout At Philadelphia Exposition

OIL-HEAT INSTITUTE'S 27th Annual Convention and National Oil Heat Exposition, being held in Philadelphia April 24 through 28, is in the active planning stage and promises to be a gathering of extreme importance to all members of the industry. Realizing that the industry is facing serious problems, outstanding among which is gas competition, members of the Exposition Committee have agreed that every effort should be made to bring to the fore this and other problems for discussion.

Convention and business sessions are to be held at the Benjamin Franklin Hotel, with the Exposition at Philadelphia's Commercial Museum. The Exposition opens on Monday, April 24 at 6:00 P.M. and on all other days at 1:00 P.M. It closes each night at 10:00 P.M., with the exception of Thursday, April 27, when it shuts down at 5:00 P.M. for the Institute's 27th annual banquet.

Ninety-five percent of the show space already has been contracted for, according to C. F. Curtin, secretary and show manager. A record turnout of manufacturers and dealers is foreseen at the Exposition where the latest in equipment and products of the oilburning and allied industries will be shown.

Cooperating in completing arrangements is the Electrical Association of Philadelphia, with John Morrison, acting director, taking an active interest.

Before the opening of the Exposition

Headquarters staff *at Oil-Heat Institute of America reviewing plans for the convention and exposition to be held in Philadelphia, April 24 through 28. Shown in the usual order are G. T. Kaufman, technical secretary; C. F. Curtin, secretary and treasurer; W. O. Spiess, national secretary, Distribution Division.*

on Monday, April 24, there will be meetings of the Exposition Committee and the retiring board of directors. Also to be held are the annual meeting of the OHI Accessory Division and the meeting of the retiring board of the Institute's Distribution Division. F. C. Haab, national chairman, Distribution Division, has appointed the following as a nominating committee: H. B. Albert, Operators Heating, Inc., Baltimore, chairman; G. H. Wolf, Jr., Wolf Supply Co., York, Pa. and S. G. Crate, Rossoe Oil Delivery Co., Seattle.

Business meetings will continue during the morning and early afternoon of April 25, Institute Day. After the Distribution Division's annual meeting, the annual meeting of the Oil-Heat Institute of America will be held. At noon the new board of directors will meet and shortly thereafter will be held a meeting of the new Distribution Division board.

The annual dinner of the Old Timers' Club has been arranged for the evening of April 25. The committee planning the affair consists of Chairman Curt Soderberg, Lionel Jacobs, Fred Haab, Chip Stauffer, Jim Thorpe and A. P. Henninger. The location is promised to be downtown near the hotels and exhibit hall.

A ladies reception will be held on Institute Day, followed the next day visit to historic spots.

An important open meeting of the OHI Engineering Committee will be held at 2:30 p.m., at Commercial Museum. L. N. Hunter, committee chairman, will preside at the meeting.

On April 26, Industry Day, the first general convention session, Industry Session, will be held. OHI President A. T. Atwill will preside. Industry problems to be discussed by speakers will include the oil situation, competition, and public relations.

The OHI Accessory Division will hold an important get-together at a luncheon on April 26. P. K. Addams, chairman of OHI Accessory Division, is planning an interesting program.

A dinner meeting of OHI Dealer Chapter secretaries will be held April 26. There is every indication that the success of this affair in Boston last year will be repeated at Philadelphia.

On Thursday morning, April 27, Dealer Day, the Dealer Session of OHI of America's 27th Annual Convention will be held. F. C. Haab, National chairman of the OHI Distribution Division, will preside. The tentatively programmed subjects for speakers include: Selling oil heat, installation and service, and standards and rules.

On Thursday evening, April 27, Oil-Heat Institute of America will hold its annual banquet and entertainment at the Ben Franklin Hotel. The banquet will be preceded by a cocktail hour.

On Friday, no convention sessions or business meetings will be scheduled. The exposition will open at 1 p.m. and the final closing will be at 10:00 p.m.

There follows a list of the companies who have taken booth space at the Exposition as of February 16:

List of Exhibitors*

NATIONAL OIL HEAT EXPOSITION
Convention Hall, Philadelphia
April 24-28, 1950

Exhibitor	*Space*
Aldrich Co.	337-341
American Artisan	342
American Radiator & Standard Sanitary Co.	212
Applied Mechanics Co.	618
Automatic Devices Co.	656
Automatic Products Co.	146-148
Bacharach Industrial Instrument Co.	237
Bell & Gossett Co.	517
Bethlehem Foundry & Machine Co.	333
Boston Machine Works Co.	243-245
Brown Products Co.	639
The Brundage Co.	533
Burnham Corp.	417
Century Eng. Corp.	412
Cities Service Oil Co.	647
Cleaver-Brooks Co.	539
Coleman Co.	135
Cole-Sewell Eng. Co.	540
Columbia Boiler Co., Inc.	552
Combustioneer Div.	251
Commercial Filters Co.	537
Corn Exchange National Bank & Trust Co.	617
Delavan Eng. Co.	351
Delco Appliance Div.	550-501
Delta Heating Corp.	151
Detroit Lubricator Co.	548
Dewey-Shepard Boiler Co.	542
Dielectric Products Co., Inc.	113
The Dole Valve Co.	447
Domestic Engineering Co.	217
Eckhart Mfg. Co., Inc.	538
Eddington Metal Specialty Co.	525
Electrol Burner Mfg. Co., Inc.	234
Fairbanks, Morse & Co.	344
Federal Oil Burner Co.	121
Field Control Div.	611
Fitzgibbons Boiler Co., Inc.	307-309
Fluid Heat Div.	326
FUELOIL & OIL HEAT	507
Fuel Oil News	446
General Electric Co., Air Conditioning Dept.	526
General Electric Co., Apparatus Dept.	239-241
General Filters, Inc.	133
General Fittings Co.	443
General Automatic Prods. Corp.	512
General Oil Heating Corp.	115
Guardian Prods. Corp.	645
Gulf Oil Corp.	318
Hajoca Corp.	628
Harbison-Walker Refractories Co.	359
Sid Harvey, Inc.	634-636
Harvey-Whipple, Inc.	511
The Heil Co.	534-536-633-635
Herco Oil Burner Corp.	311
Hershey Machine & Fdry. Co.	225
Hunter Mfg. Corp.	541
Iron Fireman Mfg. Co.	308
Jackson & Church Co.	615
Jefferson Electric Co.	343
S. T. Johnson Co.	612-614-616
Kaustine Co., Inc.	244
The Kent Co., Inc.	134
Lynn Products Co.	623
Marietta Metal Prods.	448
Master Plumber & Heating Contractor	240
May Oil Burner Div.	411
McDonnell & Miller, Inc.	317
The Mercoid Corp.	438
Metromatic Oil Burner Co.	112-116
R. E. Michel Co.	238
Minneapolis-Honeywell Regulator Co.	600-606-608-610
Monarch Mfg. Works, Inc.	441
Morse-Smith-Morse, Inc.	444
National Airoil Burner Co., Inc.	211
The National Radiator Co.	418
Norge Heat Div.	259-260
Oil Equipment Mfg. Corp.	620
Oil Heat Div., Electrical Assn. of Philadelphia	300
Oil-Heat Institute of America	400
Penn Electric Switch Co.	459
Perfex Corp.	312
Prat-Daniel Corp.	345
Preferred Utilities Mfg. Corp.	105-107-109
Quaker Mfg. Co.	408
Quiet Automatic Burner Corp.	637
Quiet-Heet Mfg. Corp.	242
R C S Tool Sales Co.	124
Radiant Utilities Corp.	621
The Rajah Co.	111
Ray Oil Burner Co.	108
Rochester Mfg. Co., Inc.	348
Scully Signal Co.	200
Shell Oil Co.	452
Silent Glow Oil Burner Corp.	559-560
Skuttle Mfg. Co.	136
H. B. Smith Co.	518
S.O.S. Products Co.	125
Sparkler Manufacturing Co.	622
Stratton & Terstegge Co.	619
Sun-Ray Burner Mfg. Corp.	422-426
Sundstrand Engineering Co.	442
Sundstrand Hydraulic Div.	233-235
Super Electric Products Corp.	420
Swirling Heat Corporation	624
Taco Heaters, Inc.	218
Thatcher Furnace Co.	508
H. A. Thrush & Co.	100
Tidewater Associated Oil Co.	123
Timken Silent Automatic Div.	350-352-449
Toridheet Div.	321-325
Torrington Mfg. Co.	207
Tru-Heet Co.	252
Tuthill Pump Co.	626
U. S. Machine Corp.	222-226
U. S. Radiator Co.	522
V. & E. Products, Inc.	117-119
Viking Mfg. Corp.	643
Warren Webster & Co.	521
Waterfilm Boilers, Inc.	208
Watts Regulator Co.	221
Webster Electric Co.	434
White-Rodgers Electric Co.	127
Will-Burt Co.	118
Williams Oil-O-Matic Div.	334-338-437
York-Shipley, Inc.	638-640-642-644-646-648-650-652-654

*As of February 16, 1950.

"Split" Warm Air

Perimeter System Gives Radiant and Forced Air Heating

ONE OF THE FIRST USES of perimeter heating in a building development since the work done on this type of heating at the University of Illinois, is in a group of ranch-type homes now being built at Wheaton, Ill., by Jog Builders. The system is designed to give maximum comfort for basementless homes, and still retain the advantages of forced warm air heating.

In practice this system provides a warm area in the floor next to all outside walls by passing warm air through a duct embedded in the floor around the perimeter of the house. Take-offs from this buried duct allow the forced warm air to enter each room in a balanced volume. Stub ducts from each room to the unit in a central utility room allow air to return to the top of the unit.

Two of the three homes completed (of 25 to be built) had units in operation when visited in January. One was using an International unit with a pot-type burner, and the other was a Luxaire with a pot burner. Both units sat over a pit in the utility room from which three buried ducts fed warm air to the perimeter duct. Warm air movement was downward into the pit, through the connecting ducts, around the perimeter to the grille, from which air is fed to the living space, either through baseboard or floor grilles. Return ducts are high on the inside walls, leading back to the top of the unit.

The houses are 4½ rooms with two bedrooms. The frame buildings are built to sell for $10,750 with attached garage, or $9,995 without the garage.

House Well Insulated

One-inch sheathing with three-quarter inch weather lath was used for outside walls. Double batt rolls insulate the walls and expanded mica is used in the ceiling. Foam glass insulating board of 2 inch thickness is installed around the foundation walls to a depth of 3 feet.

When foundations are complete a trench is cut around the entire building inside the foundation, according to Gordon Oury, an official of the building firm. This trench must be deep enough, Mr. Oury warns, to allow the perimeter duct to be completely surrounded by concrete. A light-weight concrete is used to encase the 8-inch metal duct on the bottom and sides before a four inch floor slab is poured as a floor for the whole building. Heat loss to the ground is slowed considerably by care in completely enclosing the metal duct in a generous coat of light concrete.

Mr. Oury also warns against trying to pack the perimeter duct with sand or earth in an attempt to eliminate the cost of the concrete. The round metal duct buried in the ground is bound to be attacked by rust and corrosion, he points out. Moisture in the summer will condense in the cooler duct under the floor, and eventually it is likely to rust through. If it is completely encased in concrete there will still be a serviceable duct, even when the metal has rusted badly. Without this concrete protection, sand and dirt will sift into the opening as the metal rusts out, and eventually will stop the passage of air.

Cut Heat Loss

Bedroom returns are in a drop-ceiling in the hall space between living room, bedrooms and bath. Since the attic space above this false ceiling is insulated, no unusual heat loss occurs in returning the air to the unit as might occur with returns in the unheated attic space above the insulation.

The builders now are experimenting

(*Continued on page* 134)

Layout of the perimeter system *before a 4" concrete slab is poured as a floor for the entire building.*

1965: Looking Back

A Fantasy That Assumes The Suicide Of Oilheating

by

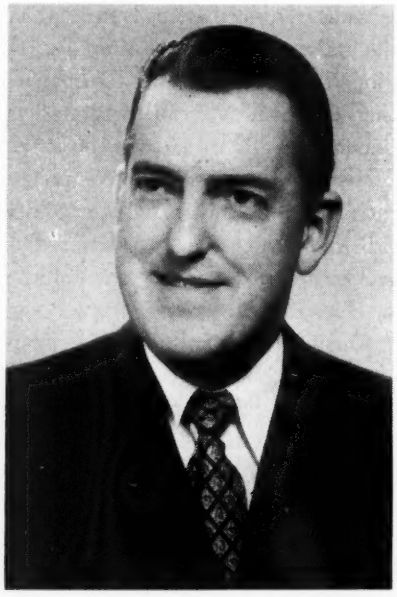
S. C. Belfield*

Edit. Note: Mr. Belfield wrote this challenge to the oilheating industry for the stimulation of oilheating friends in his home town, Washington, D. C. Natural gas came to Washington three years ago, and in the face of active gas promotion, oilheating continues to grow but at a much slower rate than formerly while gas heat sales accelerate. If Mr. Belfield overdraws some of our industry's weaknesses it is in the spirit that causes a cartoonist to give a man a bigger nose . . . for emphasis. His conclusions merit serious study.

FIVE YEARS AGO, in the Spring of 1960, officials of the handful of fueloil companies still operating in the Washington area publicly admitted that their principal activity would henceforth be the melancholy task of liquidating an industry which, at the apex of its achievement a short twenty-five years before, had served so well its public, its owners and its employees, that its future seemed bright and limitless. Today, when fewer than five hundred of Greater Washington's buildings are heated with oil, an inquiry into the growth and rapid decline of the oilheating industry, while admittedly a consideration of what is no more than a business fossil, may, nevertheless, provide some clues for survival to those businesses which may exist today in the same state of complacent confusion in which oilheating found itself in, say, 1950.

1950 is a significant date for the few mourners who were present five years ago at the official rites for an enterprise which had already been in a moribund state for some years. For 1950 marks not only the zenith of material success for the industry, achieved albeit in the last great years by a sort of passive application of once dynamic forces; but 1950 also marks the low point, indeed the apparent disappearance, of those mental attitudes and energies which were responsible in great part for the times of lusty growth.

The early Nineteen-Thirties witnessed the publication of manifestos which proclaimed the industry's vigor



S. C. Belfield

and its conviction that oilheating had been established permanently. These documents make for unprofitable, if curious, reading today; and it is ironic that, not these expressions of hope, but the sorrowful eulogies of the Spring of 1960 give us the significant clue to the debacle which oilheating brought down upon itself. The handful of leaders present to view the remains and to speak at the bier had composed their words with great care and, while their remarks differed somewhat in the descriptions of personal and individual pain, the chief thought in all their minds was phrased in exactly the same language. They spoke simply and truthfully when they all said: "It didn't have to happen."

Why, then, did it happen? What event or chain of events; what failure or failures could, in so short a time, bring to its end an industry which began its brief existence with so much cause for optimism? And, more important for our time, can businessmen today extract any useful lessons from the example of this curiosity in the history of American business casualties? I use the term curiosity because oilheating is numbered among that small group of enterprises which did not succumb to outside pressures, great as they undoubtedly were, but rather to an act of suicide. And far more curious, incredible even, is the fact that this suicide occurred in the very infancy of oilheating. What followed, unknown to its leaders, was a period of slow death. . . .

Becoming weary of fantasies about 1965? Very well. But before returning you to 1950, with its every day realities and problems, let me say that my words about the future of our industry were in no way more fanciful than much of what I have had to say about its past, less so, if anything. We all know that when the amiable failure, the village misfit, passes on, his contemporaries who have survived him try very hard to think of something nice to say about him and are often inclined, out of friendship and from vague memories, to invent virtues the departed never possessed and deeds he never performed. I have indulged myself in similar fashion by saying that our past successes have been in great part due to our mental attitudes and energies. That is a fantasy. The fact is, our successes have been achieved in spite of what has passed for consistent thinking in this industry.

There must necessarily be some inherent virtues of a very high order in oilheating to account for the wide public acceptance it has enjoyed, virtues which have thus far not been too seriously damaged by the heavy blows rained upon public confidence by the working of a policy, or rather lack of policy, un-

*Oilheating department manager, A. P. Woodson Co., Washington, D. C.

der which we pretend to operate but under which we are, in reality, frittering away that confidence which we have as a gift and not because we have done anything to deserve it. We have followed this unthinking course since the first burner was installed and it is leading in a straight line directly to the time when a mere handful of users in this area will have become a grim fact and not just a rhetorical shocking device. And we need to be shocked. We need to be shocked out of the belief that we can continue going our way whether the public will continue to go along or not. We need to be shocked out of the belief that jerry-built adjustments on the outer fringes of our activities will save us, when, in fact, our salvation depends upon a complete, radical overhaul of all we think and all we do from the center outwards.

Too Many Policies

But, you will say, oil heat does have advantages, people do like it; and, besides, we do have a policy. And you will be right. Oil heat has all kinds of advantages and the people do like it, although the more thoughtful among them (or perhaps I should say those who have suffered the most), while clasping oil heat to their bosoms, are often tempted to look sternly across the room at us and ask what we have been doing to the child. And, yes, you do have a policy, Mr. Individual Supplier. So does your golf partner down the table. So does the olive muncher sitting next to the latest guest expert. Everybody has a policy. Indeed, the number of policies seems to total somewhat more than the number of suppliers. It doesn't seem to matter very much whether these policies meet the needs of the industry as a whole in what has become a mortal struggle for survival. Our policies are like old hats. They may be battered, sweat-stained and dirty, but we like them because they fit well, because they are comfortable. Besides, anybody who judges you by the way you dress is a snob. The public is judging you all the time. But the public is not a snob. I think the public must have an enormous fund of good nature to have endured for so long the cavalier treatment they have received at our hands.

But the public will not endure forever. The time to take those drastic measures necessary to hold the customers we have and to add to them is NOW, while our losses occur piecemeal. If the desertion begins en masse it will be too late. A deserter abandons any system when it has lost its power to command his allegiance and when he departs the system is always wounded. Enough such wounds and the system dies. The allegiance of the fuel buying public of the Washington area is all we have, all we are. The industry has no existence apart from it. Can we retain it? Can we strengthen it? I know we must and I believe we can.

The program of thought and action which I offer is not for the industry leader who is seeking a soft-hat method by which he can achieve personal survival, something that will fit the same old head comfortably, conforming to the same flats and lumps. No. I have tailored for you a hair shirt. It is not pleasant to contemplate it, let alone wear it. But why should it be? Facing up to brutal facts and doing cold, hard thinking about them is never pleasant. I know. I have been wearing my hair shirt for a long time and I have learned it is the only garment suitable for wear as we explore the hard road we must all tread. Try yours on for size and let us seek out the path together.

Since I do not believe the problem of what we must do to reverse the trend of decline can be solved by a bit of patchwork here, by a minor adjustment there, by plugging a leak somewhere else, I submit that it can only be solved by the adoption of and the rigid adherence to a unified, comprehensive and high standard of performance for every single activity in which we are engaged both individually and collectively as suppliers of fueloil. If you call this proposal a counsel of perfection, I can only reply that, whether justified or not, the public demands perfection of us and, rather than pause to debate the issue, will either get what it wants or turn from us in another direction.

I cannot imagine an undertaking more wasteful of time and energy than seeking for a standard of performance among ourselves. There is none to seek. We have operated throughout our entire history with no real standards at all. The appearance of day-to-day decisions, taken out of hand, is evident in what we do even in matters of high, basic policy. We are unable to evaluate either our successes or our failures because we have no ideal to which we can have recourse. Now, we all know where the public is going if it abandons us. It is going to the gas company. Let us get there ahead of our customers and examine an existing, successfully operating standard, the absence of which among ourselves has caused our present dilemma.

There is no point in saying the gas company is different from us; that it is a public utility with a commission looking over its shoulder; that it distributes fuel the easy way; that it's the cock of the walk because it is a monopoly—one big, tight outfit—while we are many; or that circumstances force the gas company to operate in the way it does. Circumstances are forcing us to operate in a way far different from the way we do now. Yes, we are many but what is to prevent us from uniting to save our own skins?

Oil Heat a Public Utility, Too

There was a time when we were cock of the walk, or thought we were, but now an attractive challenger has caught the eye of the hens and is trying to knock us off the perch. If we distribute fuel the hard way it is only because we choose to do so. And, finally, the magnitude of our capital investment and the widespread area of our operations do make us, in effect, a public utility.

We have something far tougher than a commission looking over our shoulders —it is the great mass of the fuel-buying public which we should cherish rather than antagonize. The public utility monopolies in this area, with their unwieldy bulk spread physically through the whole fabric of the community, could never have existed for a month had they operated in the clumsy fashion in which the oilheating industry has always conducted its affairs. The operations of the electric, telephone and gas companies excite our admiration for the way in which their customers are provided such excellent service with so little uproar and confusion. The gas company has succeeded in this way not because gas as such is to be preferred to oil. I have already stated the conviction which I repeat now, that there must

necessarily be some inherent virtues of a very high order in oilheating to account for the wide public acceptance which it has enjoyed. Those virtues remain, they will remain even if our industry disappears entirely. And certainly the gas company has no monopoly on intelligence. But it did take its physical asset—gas—and its mental assets in thinking officials and carried them up to a higher place and there produced an ideal standard of conduct in the practical application of which the gas company has been extraordinarily successful. Let us not view this success as something to be feared but rather as a stimulating challenge to which we can respond with an equal success of our own.

Comparing Methods

Even a cursory examination of gas company standards of performance reveals that nowhere can our own methods be said to be comparable.

First, let us consider engineering practice. On the national level, it must be admitted, comparability exists as between gas and oil. The principles which govern the American Gas Association find their parallel in the ideals which motivate the Underwriters Laboratories. But the paths diverge when we move down to the level of local practice. The gas company here resolutely polices itself, trying constantly and consistently to live up to the ideal it has set. We, it must be said, have gone from time to time to the District Government to set up a code under which we could all operate to the best advantage of ourselves and of our customers. Unhappily, these efforts have come to nothing. But surely it will be to our profit to renew them.

The gas company has always manifested an interest in heating systems of whatever type, already installed in buildings, to determine their adequacy. Another among the many things which they do is to insist that the products of combustion be vented into a chimney with sufficient draft. From the very outset they have displayed an unselfish interest in their customers' desire for economy in fuel by recommending or insisting upon the insulation of buildings and the installation of storm windows.

What view have we taken? I submit that it has been and remains a narrow one. Oilburner dealers gave insufficient attention to the highly important matter of adequacy of heating systems, and, later, when the fueloil dealer became the installer of the burning equipment, those who were wise took it into account. Still others, for one reason or another, paid little or no attention.

Many burners are today, therefore, operating in distribution systems which are wasteful of fuel and which do not provide adequate comfort. There are countless oilburners in use now with heating systems connected to flues which are hopelessly inadequate. Noise, inefficiency and troublesome "no heat" service are the result. If at the beginning we had established a code of engineering practice we might have rid ourselves and our customers of poorly engineered installations before they could ever have been made. But we have inherited these heating plants, we must nurse them along, we must carry them on our protesting backs like the Old Man of the Sea. And, like him, it will take determination, patience and hard work to dislodge them.

Single Standard Needed

We must have a single standard for engineering and installation governing personnel, equipment and methods, all the way from drawing board to final test and beyond. The gas company has it. It works for them. We can have it. It will work for us. The recommendation of insulation and storm sash is not a practice common to all of us, although some dealers are engaged in the sale of these products. This brings us to a consideration of fuel itself.

If we do not match gas as a highly refined fuel there is certainly a great deal we can do to close the wide gap in comparative refinement. Neglected among us is the improvement of cleanliness in oil. Too little attention is given to the delivery of clean oil to our bulk plants; little is done to filter oil before it goes out to the user and there are thousands of oilburners operating today in this area which lack the advantage of a minimum capacity filter at the burner. What this means in service calls is too well known to merit comment.

As he is with his own body, the home owner is happiest and most comfortable with his heating plant when he is not aware that it is functioning. Gas contributes to this state of mind at the very beginning of its work by arriving in the area to be heated noiselessly, cleanly and without interruption. The many improperly graded fill and vent lines, the absence of VENTALARM signals and lack of systematic, universally applied method for the selection and appropriate training of deliverymen result in that curse of our annual heating cycle —the spill. The spill, when it occurs in basements, annoys the customer.

When it happens outside, on lawns and around shrubbery, the indignant user is often subjected to the nuisance of filing a claim. When a piece of shrubbery is ruined by spillage, you can only rarely patch up the customer's good will with even a generous settlement.

When do you hear of a gas customer running out of fuel? Enough said about that. Oil companies pride themselves on holding their percentage of run-outs to a very low figure. It seems to me that the only run-out percentage in which we are justified in priding ourselves would be—zero. There is little cause for doubt that run-outs originate in management's policy of too low reserves. This is not the only reason, of course. The manager of every fueloil department can offer others. No manager can afford the luxury of feeling satisfied about how his department operates, no matter how efficiently it may seem to run, if a single customer on his list is permitted to be without fuel. With the gas company able, willing and eager to supply fuel without interruption, we must not rest until we can do the same. I should add that every path to greater economy in the delivery of oil should be thoroughly explored.

Oilburner Service

And now let us huddle closer together and plunge fearlessly into the unmapped jungle to which we are pleased to refer as oilburner service. But before we gingerly begin to cut our way into this shadowy world, so replete with exotic plants and the cries of strange beasts, let us fix one fact firmly in our minds. We cannot sell fueloil. We install burners; we furnish fuel; and we provide service. We offer burners and service so that we may furnish oil. And blindly, to our grievous injury, we have

(*Continued on page 126*)

Revised 1949 Installation Data

by
Robert Gray

FINAL ESTIMATES of 1949 domestic oilburner and unit installations reached the surprisingly high figure of 614,712. At the time the January issue was being written in December the estimate, based upon reports from several hundred dealers, was 570,593, or seven per cent below the final figure.

The lower figure had been accumulated from dealer reports throughout the year and checked by the large annual dealer survey in December. It now becomes clear that too little adjustment was made to cover direct factory sales to builders and other business that bypasses the dealer.

The final figure of 614,712 installations was computed as follows:

Factory Shipments	597,292
Less Exports	9,220
Net U.S. Shipments	588,072
Used from Dealer Stocks	26,640
Total Installations	614,712

The factory shipment figure is based on Census Bureau surveys, adjusted to include non-reporting manufacturers. Export data are from the Bureau of Foreign and Domestic Commerce.

Dealer stocks at the start of the year had been 81,118 and at the close 54,478. Dealers have shown a consistent down trend in their inventories for two years, and are now keeping them low in the belief that prices will go lower before they rise.

The table shows considerable detail on installations by states. The new total of oilburners in use at the start of this year, 4,490,535, makes allowance for the 38,250 oilheating losses to other fuels. This factor is not shown in a column, but it does in a small way affect each of the state totals of burners operating.

The Midwest showed the strongest rate of gain and for the first time passed the million burner mark of those operating. The country as a whole gained 13% while the Midwest picked up 19% in oil customers. The increase in total burners sold during the year was 35% over 1949. It now looks as though sales for 1950 could conservatively pass 700,000, as that would represent only a 14% gain.

The new higher figure on installations for 1949 will naturally affect quite a number of the detailed figures in the January issue. Any figure in that issue that is a part of, or related to, oilburner installations should be increased by a multiplier of 1.077 unless the later figure is shown in this new table.

Distillate Oilburner Installations By States, 1949

	Burners In Use 1/1/49	INSTALLATIONS 1949				Burners In Use 1/1/50
		New Homes	Replacements	Conversions	Total	
Maine	52,333	1,905	642	2,870	5,417	56,817
New Hampshire	45,513	3,119	1,052	4,695	8,866	52,851
Vermont	13,187	693	234	1,043	1,970	14,817
Massachusetts	391,315	16,161	5,449	24,334	45,944	429,343
Rhode Island	51,716	2,107	710	3,172	5,989	56,673
Connecticut	173,845	8,136	2,750	12,237	23,123	192,976
TOTAL NEW ENGLAND	727,909	32,121	10,837	48,351	91,309	803,477
New York	723,445	21,479	10,166	68,711	100,356	811,794
New Jersey	351,261	11,623	5,468	36,884	53,975	398,778
Pennsylvania	312,485	13,605	6,519	44,227	64,351	369,137
Delaware	24,398	1,031	494	3,350	4,875	28,690
Maryland	174,309	3,999	1,916	13,000	18,915	191,161
District of Columbia	49,836	869	424	2,736	4,029	53,166
TOTAL MID-ATLANTIC	1,635,734	52,606	24,987	168,908	246,501	1,852,726
Virginia	95,024	6,666	1,512	8,102	16,280	109,619
West Virginia	450	255	58	311	624	1,009
North Carolina	38,159	4,548	1,032	5,527	11,107	48,116
South Carolina	13,599	855	194	1,039	2,088	15,471
Georgia	8,446	463	105	564	1,132	9,461
Florida	37,915	656	151	788	1,595	39,342
TOTAL SOUTH ATLANTIC	193,593	13,443	3,052	16,331	32,826	223,018
Michigan	166,851	14,383	3,698	24,138	42,219	202,900
Ohio	52,637	7,670	1,972	12,871	22,513	71,860
Indiana	51,504	6,420	1,651	10,775	18,846	67,596
Illinois	159,325	13,433	3,454	22,543	39,430	192,992
Wisconsin	114,436	10,444	2,685	17,527	30,656	140,612
Minnesota	151,238	5,902	1,518	9,906	17,326	166,032
Iowa	53,701	5,445	1,400	9,138	15,983	67,348
Missouri	63,508	1,995	513	3,348	5,856	68,508
Kansas	7,006	117	30	197	344	7,300
Nebraska	36,882	994	256	1,667	2,917	39,372
South Dakota	19,572	727	187	1,219	2,133	21,393
North Dakota	17,641	1,415	373	2,346	4,134	21,158
TOTAL MIDWEST	894,301	68,945	17,737	115,675	202,357	1,067,071
Kentucky	4,829	616	140	750	1,506	5,906
Tennessee	8,849	886	201	1,077	2,164	10,397
Alabama	6,604	148	33	179	360	6,862
Mississippi	1,140	29	7	34	70	1,190
Arkansas	2,019	22	5	28	55	2,058
Louisiana	9,121	20	5	24	49	9,156
Oklahoma	1,335	43	10	53	106	1,411
Texas	26,804	160	36	192	388	27,082
TOTAL SOUTH CENTRAL	60,701	1,924	437	2,337	4,698	64,062
Montana	5,197	437	131	290	858	5,268
Idaho	10,548	663	199	442	1,304	10,657
Wyoming	2,547	64	19	43	126	2,558
Colorado	9,210	236	71	158	465	9,249
Utah	7,467	677	203	450	1,330	7,578
Nevada	8,671	437	131	290	858	8,742
New Mexico	2,459	75	23	50	148	2,471
Arizona	13,013	50	15	33	98	13,021
TOTAL MOUNTAIN STATES	59,112	2,639	792	1,756	5,187	59,544
Washington	138,474	6,682	2,008	4,467	13,157	147,623
Oregon	82,247	6,929	2,082	4,632	13,643	92,808
California	183,702	2,557	768	1,709	5,034	180,206
TOTAL PACIFIC	404,423	16,168	4,858	10,808	31,834	420,637
TOTAL UNITED STATES	3,975,773	187,846	62,700	364,166	614,712	4,490,535

Vaporizing Burner Trouble

fueloil & oil heat
Short Short Article on Burner Service

GIVE A POT-TYPE, vaporizing burner the same loving care usually given another type burner, and it does much better than it would otherwise. The leading dealers in pressure and low pressure burners go to town with skillful service when one of their pets runs amok. A dealer selling wall flame rotaries always loves any job that acts up. Patience and affection pour out when a dealer studies the ills of an atomizing vertical rotary burner or a horizontal rotary cup job.

A pot-type burner is by comparison in a tough spot when it gets sick. Too often, anyhow, it was sold and installed by an artist active in hardware or sheetmetal, who knows nothing about fueloil combustion and cares less. A tinkering handyman, more successful with stuck coal-grates and plugged smokepipes than with sensitive thermostats and constant level devices, too often is sent on service calls. When a real burner man finally gets to a pot-type burner that's been haywire for months, he finds a mess and uses the first excuse to make a fast get-away.

This forced-air furnace equipped with a vaporizing, pot-type burner never would have received expert attention except that its owner had a good friend who handled fueloil in a nearby city, and the fueloil dealer in turn deserved favors from a man who, though not fond of pot-type burners at the start, was a master of both the theoretical and practical aspects of oil combustion. To interest the burner expert in a sick pot-type burner did take some talking, but the fueloil dealer knew that once the expert started working on any kind of burner he wound up with it working beautifully even if he had to redesign it.

The owner's complaints included, "here, oil heat is far from clean," objections to the pilot's going out frequently, and pointing out $240 spent a year heating a small house. He declared the furnace unit was poorly engineered. His old service man, said he, could not even get from the furnace the stack temperature reading experts said should be gotten from it.

The new man on the job, after obtaining much information on this type equipment, concluded that all the complaints were caused by poor combustion. He made tests of over-fire and smokepipe draft, smoke, CO_2, and finally of stack temperature. With the built-in swinging disc type draft regulator keeping the over-fire draft at the .01" the expert desired at first, the air admitted to the smokepipe through the draft regulator cooled the smokepipe gases and prevented obtaining a stack temperature reading. Using a piece of sheet metal on a handle to block the flue outlet and maintain .01" over-fire draft, the expert held shut the draft regulator built in the smokehood of the furnace, and delighted the owner by obtaining a stack temperature reading.

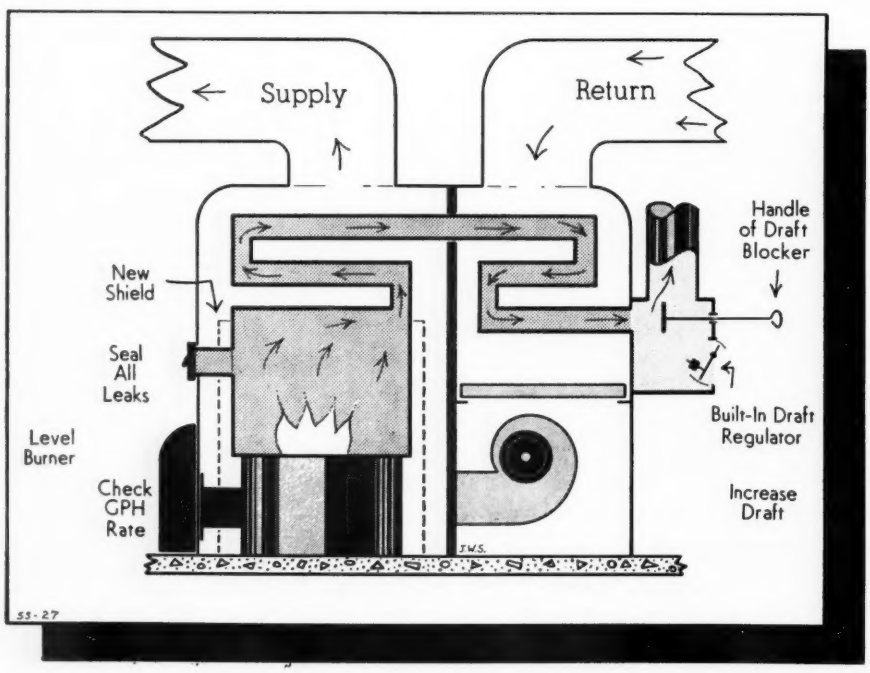
These service steps were taken next: 1. The pot of the burner, first tilted as though a level had never been used on it, was levelled properly; 2. Data were obtained on the gph rate most likely to produce clean combustion, and the burner was painstakingly adjusted for this rate; 3. All soot and carbon was cleaned, using a vacuum cleaner, from the burner, furnace heating surfaces, smokepipe and chimney flue; 4. Many air leaks were located and sealed permanently.

Stubbornly, the burner continued to give exceedingly incomplete combustion. Increasing the over-fire draft to .03" helped a little, but not enough.

Additional checking brought out the reason for the poor combustion, says the expert. The furnace unit was of two or three times the capacity needed for the house. Whether a very small flame was used to match the low heat losses of the house, or the flame size for which the furnace was rated was used, never was the furnace temperature high enough for good, clean combustion.

Scratching his head and scowling, the service expert said to himself, "Those direct heating surfaces are so cool that they just drag excessive radiant heat from the flame and pot, chilling both to the point of making sooty, smoky combustion. That's why the direct heating surfaces, as well as the flue passages and chimney, are coated with an inch of fluffy soot."

This thought gave him the answer to the problem: Raise considerably the temperature of the furnace's direct heating surfaces to offset its being oversize. He did this by enclosing the main part of the furnace in a shield of sheetmetal, shown by dotted lines in the drawing, which makes the direct heating surfaces so hot that carbon, built up intentionally for a test, burns away during normal operation of the furnace.



Open All Night

Wire Recorder Takes Fueloil Orders When Office Is Closed

by
L. T. Bruhnke

CUSTOMERS SHOULD be able to order their fueloil during business hours but D. W. Gluck, president of International Oil Company of Milwaukee found that whenever he dropped into the office at odd hours at night or on Sunday, the phone rang and orders were taken for oil. Telephone answering services are available in Milwaukee but Gluck felt that these cost more than the amount of night business justified. When the electronic secretary became available, he installed one so that his customers can order oil at any time.

The electronic secretary isn't connected to the phone circuit electrically at all. The phone is put into the machine in such a way that the hand set is raised ⅜ of an inch when the phone rings. The inexpensive phonograph record then tells anything that the owner desires to tell and finishes with, "I am ready to begin." Then the wire recorder takes the message dictated to it. The length of time for receiving messages can be varied for the type of business but the makers do not recommend setting it for longer than three minutes. If a longer message is desired, another phone call can be made.

Now when a customer rings, WEst 3-6650 at any non-business hour, there is an immediate, "Hello, I am the electronic secretary for International Oil Company, distributors of BLUTONE oil. Please give your name and address and the number of gallons wanted. I am ready to begin." The phonograph record with this message can be changed any time it is desirable. Messages can be revised by making a new record.

The order or any other message is then recorded on the wire recorder which can record a total of an hour's message. When the warehouse man, Ralph Ingraham gets there at 7 in the morning, he immediately transcribes the orders and makes plans for deliveries. Messages are not erased from the wire until the machine is set to take messages the next night when they are magnetically erased just before the new message is put on. Hence all night calls can be replaced as often and as slowly as need be. The warehouse man attends to the orders and the office force re-runs the wire for anything pertaining to their work.

Customers like it. At first some become speechless and others laugh. A few are disgusted and say, "Whatsa matter, can't you answer?" The night orders are phoned in by people who work nights or for one reason or another find it inconvenient to call during the day time. By ordering as soon as they think of it, they eliminate forgetting with the necessary economizing if they run short. They do not need to write notes to themselves saying, "Order some oil."

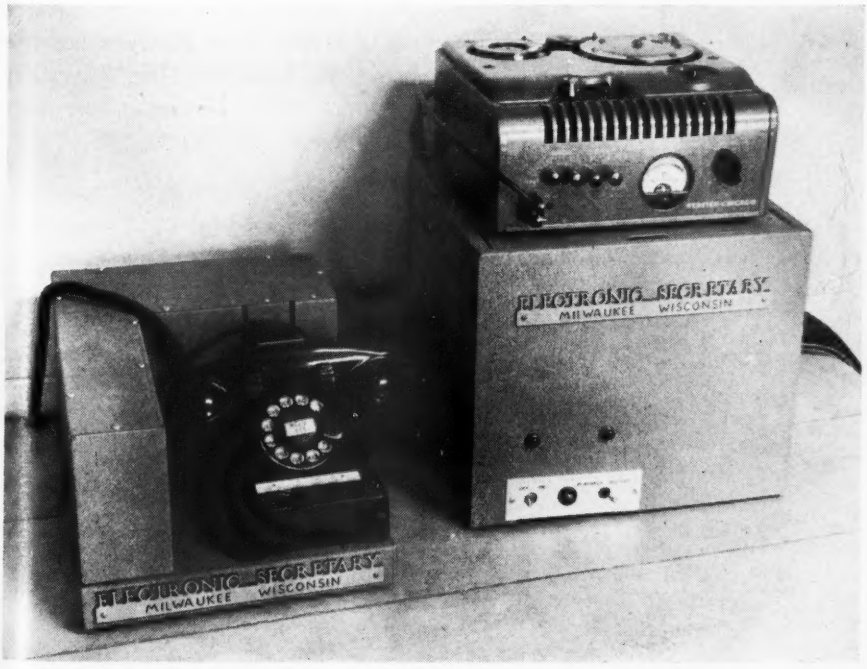
Some customers call in the next day to make sure that their order has been taken care of. This rather proves they could call during working hours but the novelty of it now is good publicity for International Oil—because the thing is news to those who discover it for the first time. And it doesn't hurt the company to have customers tell friends and neighbors about the electronic secretary.

Some people call back the second time to repeat what they put on the wire the first time just to make sure they said everything they wanted to. People soon learn how to state their name, address and the amount of oil.

As Gluck has been in the oil business all his life some people who don't know about the secretary call him at his home to order oil. In fact they sometimes get him out of bed. But as a man who believes in service, he dutifully takes the order and then telephones it to the electronic secretary so the warehouse man can take care of it early.

Besides these occasional home orders, Gluck can also call in to issue instructions to any employee rather than making a note of it to tell him later. In this way forgetting is eliminated.

International receives from 100 to 150 messages a week over the secretary. It cost $375 but Gluck would not be



Electronic secretary. *Phone can be lifted out of it and used on another desk or one can telephone with it in place. When machine is turned on, the handset is raised ⅜ of an inch and the record which is in the large case to the right starts to play. The wire recorder can be seen on top.*

without it. While it is hard to say whether he gets any more business from it, his customers do not have to economize because they are running low. They can order as soon as they need it.

Some concerns do not have the wire recorder. The record is made out to transfer the call to another number. Thus a doctor would state where he could be reached if he wasn't going to be home.

While the Electronic secretary cannot answer questions, this really isn't necessary because customers have faith in the concern they are dealing with. Prices must be competitive in order to get repeat business.

While International uses it only for night messages, the instrument can also be used for taking dictation or meeting minutes. It records messages inductively so that there are no connections to the phone circuit. One can take down the entire telephone conversation provided one has permission to do it. However without the beep tone in the circuit to notify the other person that the conversation was being recorded, the transscription could not be used in court. But there are times when detailed instructions are being received and these can be wire recorded word for word.

International has a special oil for space heaters and they were the first ones to use a chemical additive. In order to make it distinctive, they color it blue so the customers can identify it. It is chemically treated and colored at their plant. On each phone conversation, BLUTONE oil is mentioned. Thus International is making full use of their brand name.

They also have the regular grades of domestic heating and industrial oil. They put decals on the tanks of their oil burner customers which plug International oil. The decals do not mention the electronic secretary because they list the telephone numbers for emergency service. Orders on the electronic secretary would not be taken care of until the next day.

International delivers oil to Milwaukee and its suburbs. They have ten trucks with capacity varying from 1,000 to 1,600 gallons. Gluck has four salesmen. He does not do much advertising but by having a good product with a distinctive color, he does business without it. And the Electronic Secretary is good publicity.

A decalcomania that International uses to advertise its services.

Ralph Ingraham, *warehouse man for International Oil, taking the night orders from the Electronic secretary.*

M. A. Straub, assistant sales manager, Norge Heat Div., Borg-Warner Corp., Detroit 26, Mich., has been placed in charge of sales promotion and advertising activities. John Posselius has been named by Ross Roy, Inc., advertising agency, to handle contact and service on the Norge Heat account.

Edward T. Alstrom has been named general sales manager, Crotty Mfg. Corp., Flushing, N. Y., manufacturers of boilers and fueloil preheaters. Mr. Alstrom was a co-owner of Alstrom Corp., manufacturers of heat transfer equipment and recently developed an approved type fueloil preheater. He long has been identified with the heat generation and heat exchange industry.

Dean Lorin G. Miller, Dean, College of Engineering, Michigan State College, has been appointed engineering consultant by United States Radiator Corp., Detroit 26, Mich. One of the leading authorities in the country in the field of comfort heating, Dean Miller will participate actively in engineering research and development.

One Oil System Feeds 278 Burners

New Problems Faced in Distributing Oil by Buried Lines

by
J. W. Schulz

THE many fueloil distributors who don't like 275-gallon tanks can call this new housing project "Dream Come True."

The 276- small pressure burners, each firing a separate furnace-duct system at .85 gph, are not connected to 275-gallon tanks as might be expected. All of them receive oil from two side-by-side 10,000-gallon tanks.

Two larger pressure burners, each firing a separate boiler-radiator system at 5.5 gph, receive oil from the same tanks.

For those fueloil and oilburner enthusiasts who dote on last-minute convenience features and simplification of fueloil deliveries, this coupling of 278 burners to one oil supply system makes a pipe dream come true. House-to-house oil piping on no small scale is an actuality on this New Haven, Conn. housing project.

Additional features technical in nature make oil heat do its most-modern best for the 300 families occupying these new homes. Every family has its own room thermostat and full control over its heat, for example, though the smallest buildings provide homes for four families and others house up to 12 families. The impressive project includes 59 buildings.

McConaughy Terrace is the name of this fueloil supplier's paradise. A sign at the entrance to the expanse of just-completed buildings explains that this is a moderate rental housing project of the Housing Authority of the City of New Haven, erected in cooperation with the State of Connecticut and the Connecticut State Housing Authority; Office of Douglas Orr, Architect; The Fusco-Amatruda Co., Contractor.

Each tenant has his own meter for the electricity he uses, including that used for his individual electric water heater. The fueloil used for heating is not metered, however. In effect, the tenants pay for the fueloil used by an arrangement that works out similar to renting an apartment with fuel for heating provided by the landlord.

Allen Hubbard, of the firm Hubbard, Lawless, and Blakely, Consulting Engineers, is responsible for the conception and design of the storage, pumping, and piping system that feeds the oil to the 278 burners.

Hubbard considered fully many oil tank arrangements including usual individual tanks, group tanks, and distribution systems of different sizes and types. Roads were important. Now the housing project has two main roads. Additional, costly roads would have been needed to permit oil trucks to reach buildings if each of the 59 buildings had been equipped with its own oil storage tank, or if each of the 278 burners had been connected to its own tank.

Buckling down to planning the piping of oil to hundreds of burners, Hubbard found that heavy thinking was required. Even to solve pipe size problems, he had to take into consideration oil temperature minimums and maximums, resultant viscosities, velocities, piping pressure drops, foaming and air-ridding, and many related factors. Paper-work answers were one thing, but the fact stared him in the face that a distribution system of the type he planned was without precedent. This was pioneering.

The oil supply system had to jibe with the characteristics of oilburners, particularly their controls, pumps, and shut-off valves. The electric current might fail in the pump room or on the entire project; this created complications.

A view *of the housing development, illustrating the type of oilheated dwelling units supplied by one master oil system for two hundred and seventy-eight burners.*

The equipment needed for the pump room, which at first blush may seem to consist of only duplicate pump sets, worked out anything but simple. Many safety devices were needed to provide a dependable and uninterrupted supply of oil for each circuit of the distribution system. The need was apparent for additional specialties, valves, flow-indicators, controls, safety devices, and signals of types never used before.

Engineering the oil distribution system was made difficult by the fact that the housing project is on the side of a hill; there are terraces to McConaughy Terrace. Some of the burners are about 35 ft. higher than others, and from the start it was known that different groups of burners at different levels could not be supplied oil by a distribution system that placed a few feet head of oil on the highest burners, and 35 ft. additional head on the lowest burners.

Later after the oil lines had been tested and covered, geographical factors again brought on unavoidable headaches. Not only was the dense hard-clay, water-bearing soil an obstacle to installing permanent underground oil oil distribution lines, but grading work and trucks and tractors, not kind to lines already finished, introduced predestined difficulties. Albeit every precaution, much was learned about piping breaks and leaks, and resultant dirt and water.

Studying the project after deciding to use a type fueloil distribution system he invented and developed especially for the project, Allen Hubbard concentrated on the furnace-heated buildings. Each of these is made up of four or six dwelling units, and each of these dwelling units is heated by its own burner firing .85 gph.

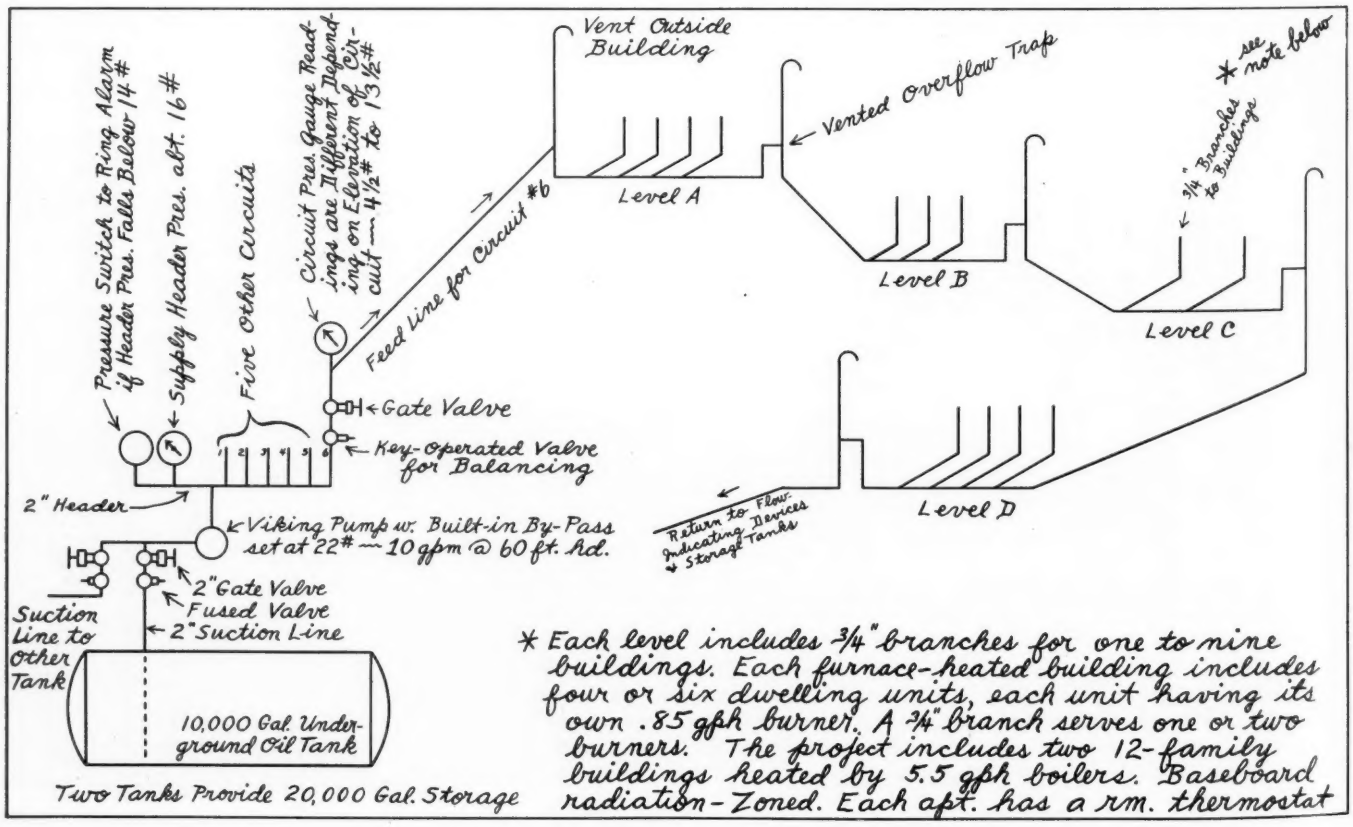
Up to nine buildings located side-by-side could be considered at the same level, he learned from studying elevations. That is, as far as oil levelling arrangements were considered, no more than nine side-by-side buildings could considered at the same level. Usually fewer than nine buildings form a same-level group. A few buildings had to be considered individually with respect to level as they did not fit into nearby same-level groups.

"The secret of the distribution system," Hubbard explains, "lies in the use of overflow traps to provide proper levels of oil for each group of buildings."

The furnaces are in utility rooms, the homes being no-basement type. Hubbard designed the distribution system to provide the oil head or oil pressure in each utility room that would bring the oil to approximately the floor level of the room. Thus, a break in a feed line at a fuel unit would not cause oil to spurt out onto the floor with resultant nuisance and hazard; the distribution system would put no pressure on the fuel unit. Neither, however, would a burner have to develop considerable vacuum to obtain oil from the distribution system.

Knowing the secret that provided proper oil levels for the 276 burners used for the 276 warm air furnaces, I had the privilege and pleasure of seeing the system put into operation from the time the first batch of burners were started. The oil-levelling works splendidly. Realizing all the while that some burners are about 35 ft. higher than others, I marvelled that each burner operated as though for test purposes it was connected to an open five-gallon can of oil placed on the floor of the utility room.

The accompanying diagram reveals fully the secret of the oil distribution system. It does not show every detail; for example, actually two pump sets are in the system, either of which can carry the full load, but the diagram shows only one pump. Oil strainers and filters


Vent Outside Building
Vented Overflow Trap
* see note below
¾" Branches to Buildings
Level A
Level B
Level C
Level D
Feed Line for Circuit #6
Circuit Pres. Gauge Readings are Different Depending on Elevation of Circuit — 4½# to 13½#
Pressure Switch to Ring Alarm if Header Pres. Falls Below 14 #
Supply Header Pres. abt. 16 #
Five other Circuits
Gate Valve
Key-operated Valve for Balancing
2" Header
Viking Pump w. Built-in By-Pass set at 22# — 10 gpm @ 60 ft. hd.
Return to Flow-Indicating Devices & Storage Tanks
2" Gate Valve
Fused Valve
2" Suction Line
Suction Line to Other Tank
10,000 Gal. Underground Oil Tank
Two Tanks Provide 20,000 Gal. Storage
* Each level includes ¾" branches for one to nine buildings. Each furnace-heated building includes four or six dwelling units, each unit having its own .85 gph burner. A ¾" branch serves one or two burners. The project includes two 12-family buildings heated by 5.5 gph boilers. Baseboard radiation - Zoned. Each apt. has a rm. thermostat

Schematic drawing *showing general layout of oil distribution system.*

are not shown. The elaborate pump-room controls and signals are not in the diagram.

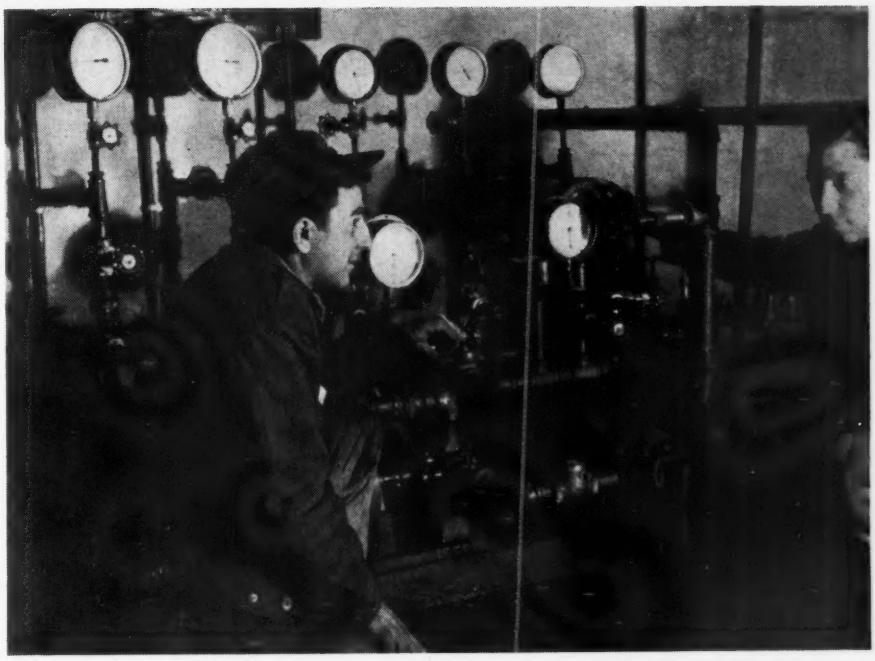
The Viking pump in the drawing is operated continuously to put pressure on the 2″ header shown above the pump. The minimum header pressure, shown by a gauge, is 16 lbs.

Six circuits, used to provide oil for the 276 burners in the homes heated by warm-air furnaces, are connected to this 2″ header as the drawing shows. Circuit #6 is shown in the drawing; the other circuits are of the same principle.

Six key-operated, flow-regulating valves, through which the oil flows on leaving the 2″ header, are adjusted manually to arrive at the proper oil flow through each of the six circuits. This proper oil flow is gauged by pressure gauges calibrated for the static head of each circuit, which corresponds to the circuit's top point elevation. The different circuits operate under different static head pressures, as their top point elevations are different. Driven by a ½ hp motor and able to provide 10 gpm at 60 ft. head, the circulating pump has a considerable excess capacity compared to the sum-total oil requirements of the 276 burners it feeds. and this eliminates chances of hair-splitting adjustments being needed to balance the flow of oil to the six circuits. The pumping cost is a negligible amount, related to fueloil costs.

The feed line for circuit #6 goes up to level A, where as the drawing shows it provides oil for the four buildings which form the highest same-level group fed by this circuit. Each building receives oil from a ¾″ branch. Some of the buildings have four burners for four dwelling units, others have six burners for six dwelling units.

Notice particularly the vented overflow trap at the output end of the horizontal line for level A. This trap, located at elevation approximately equal to that of the floor level of the utility rooms of buildings at Level A, provides positive, dependable control over the level of oil for the highest group of buildings in this circuit. The oil overflowing the first vented overflow trap goes down to level B, where again a vented overflow trap sets the oil level for a group of buildings. Oil is fed to lower levels C and D in the same circuit through use of the same principles. There is a vented overflow trap at the oil-output end of the distribution piping for each group of same-level buildings. This trap sets the oil level for the particular group of buildings.



A look inside *the central pumping station, the heart of this unique oil supply arrangement.*

The use of this series cascade or overflow principle, for providing proper oil levels for buildings at different elevations, has tremendous advantages over the use of, for example, float valves or pressure regulating valves. The best specialties employing automatic valves may need inspection and adjustment, may operate improperly because of dirt and sediment, and may in years of use develop defects and fail. Hubbard's system uses oil flow instead of special oil-handling devices. It employs the beautifully simple idea that overflow can control level; pump a stream of oil into a pail, and the oil overflows over the rim of the pail, setting an oil level at the top of the pail that will not vary upwards and downwards.

The proper operation of circuit #6 in the drawing, and of each of the other five circuits, depends of course on feeding the circuit sufficient oil so that, with all the burners in the circuit running, oil still returns from the circuit. Pumping sufficient oil into the circuit depends on proper manual setting of the key-operated balancing valve that feeds the circuit. As has been indicated, the circulating pump's excess capacity makes for easy balancing of the key-operated valves.

Sight-glass flow-indicators, in the return lines, permit easy check-up on the adjustment of the key-operated valves. These indicators are grouped in the pump room. In addition, Allen Hubbard has provided electrical indicators which he has designed especially for the purpose. Truly ingenious, the arrangement turns on a signal light and sounds an alarm when the return flow of oil from any circuit drops below a certain preselected flow rate. A signal light turns on and an alarm is sounded also if the pressure of the 2″ header drops, and if the supply pressure to any supply circuit becomes unsatisfactorily low.

The completion of this oil distribution system has not ended Hubbard's development of ideas concerning the perfect, foolproof system for distributing oil through house-to-house lines on such a terrace-type housing project. The possibility of current failure in the pump room has been offset by the installation of a small automatic-starting generator, gasoline engine driven. Two experimental 275-gallon reservoir tanks have been installed for two building groups, each to serve as a reserve reservoir for its group in case of supply failure. So far, the supply system appears to be reliable to the degree of rendering unwarranted the installation of such a reserve tank for each of the building groups.

Space to Work

A Discussion Of The Problem Of Closed Sales Territories

by
William Sheppard

ALMOST EVERY FUELOIL and oilheat dealer hopes to have a sales force which turns in consistently a high volume of sales and is troubled with a minimum of turnover.

One factor, which is concerning an increasing number of dealers, is the matter of territories for salesmen. Shall they be turned loose to dig for sales anywhere in the company's business area? Or shall they be restricted to strictly closed territories with sharply defined boundaries, only within which they can work? Or is a combination of those two extremes more feasible? The right answer to those questions can set many a sales force on the right track toward achieving its goal.

The territorial arrangements possible are:

1. *Completely open.* Selling under this policy each salesman can canvass or follow up leads anywhere the company is willing to sell. Leads are generally given out to the salesmen in rotation.

2. *Territories for leads only.* Each salesman is assigned a territory and the leads that come to the office from that territory are given to him, but he is not restricted as to where he can go to develop sales. The decision is left to the salesmen themselves to work out.

3. *Working territories.* With this each salesman is assigned a territory. Leads from that territory are given to him and he may canvass only in that territory. However, he is permitted to follow up any leads which he may turn up wherever the prospect may live in the company's business area.

4. *Closed territories.* This plan provides each salesman with a definite territory. He may canvass in it only and may not follow up a lead in another man's territory unless he has first gotten permission from that man to enter his area. If the man refuses, then the salesman is not credited with the order even if he turns it in to the company office; that order belongs to the man from whose territory it came.

Let's look at the advantages and disadvantages of each of these procedures, taking them up in the above order.

The chief advantage of having open territories is that it requires practically no supervision on the part of the dealer or his sales manager. It is the logical procedure when there is just a one or two man sales force as they should be free to roam at will in the whole territory. However, with a large sales force the open territory plan presents definite disadvantages. The salesmen are apt to jump around in the area in hit or miss fashion and the company is thus likely not to get a balanced share of the business from the various sections in which it does business. The only way to overcome this is to have the company's sales manager run his sales force in crews that cover all the sections in rotation. But, as the crew set-up is not used by many oilheat dealers because it is a poor way to develop oil business, the final decision must be that the open territory plan will not bring in an even share of business from company's sphere of activity, even though, it is admitted, the total sales volume may be considered satisfactory by the dealer.

Another disadvantage of the open territory plan is that the distribution of leads are likely to entail headaches. Unless actual favoritism enters in, leads are given out in rotation. The sales manager may do this with complete impartiality but he will scarcely ever be able to convince all his salesmen that he does not at times give his "hot leads" to his best closers. A salesman's frame of mind is important to the company. Giving leads by rotation is hard on that frame of mind even though the men have confidence in their sales manager.

Still another disadvantage of open territories is that new men are not presented with a definite area to work. They may be told to cover a certain number of blocks but the chances are that they'll be likely to run into a veteran with the company who has staked off his claim to what looks like the juicier prospects. With no definite area to work in the new men are likely to jump around hoping to find a spot with plenty of cream in it. Doing that they will spend more time and energy prospecting than actually getting down to selling. New salesmen need all the encouragement they can get. Open territories don't provide the maximum encouragement needed.

When territories are assigned for leads only, the problem of passing out leads is eliminated. And, as with open territories, there is little need of company supervision because the men are not confined to those territories in any manner. But, of course, outside of the assignment of leads, the same disadvantages come with this arrangement as with completely open territories. What is likely to happen is that the men will have a tacit understanding among themselves not to cross into the other man's "territory." This can work fine with a three or four man sales force made up of congenial men. But trouble arises when the understanding is broken—because of a large commercial heating job, for instance, which one salesman may hear about first in another man's area. Every oil heat dealer wants his sales force to work together as a happy team. Territories which are not really territories are likely to present too many opportunities for dissension.

The working territory plan can be used successfully by many oil heat dealers with good sized sales forces. As explained previously, with this each man is assigned a definite territory. He is given the leads that come in from it and he canvasses only in his assigned area. He is, however, permitted to follow up leads wherever he gets them.

The advantages of working territories are impressive. The new salesman is assigned an area of his own to develop for oil business plus the other products the company handles. The company can

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thus tell which are above and below average. Weak sections can be bolstered by sales help or by replacing the salesman. Or, if it turns out that the salesman has been assigned a territory which has a poor potential, the boundaries can be changed. Another advantage to the company is that it is not likely to miss sales which one particular salesman alone is able to get but may not be permitted to go after in a closed territory system. Proponents of this plan say that salesmen should develop prospects from their customers and that often these customers refer the salesman to a friend living on the other side of town. They believe that that salesmen should be allowed to follow up that lead and so be able to say to the prospect, "Good evening, your friend, Mr. Smith, suggested that I see you about a new oilburner."

Dealers who have closed territories for their salesmen say that this plan eliminates the disadvantages of working territories at no loss in sales to the company. They build a strong case with:

1. *Closed territories result in more productive work by the salesman.* The salesman knows exactly where he must work and so wastes little time looking for "greener pastures." In answer to those dealers who don't want to miss sales that only one particular salesman is able to get, they say that, first, it is quite likely another man can close the sale if he's given the lead and, second, a salesman can be more productive when he works a small area.

2. *Closed territories result in less salesmen turnover.* Sales are made by salesmen talking to prospects. When a salesman is able to talk to more prospects, as he is able to do when working a closed territory, more sales result. He is happier and stays with the company. If his sales are low, sales managers, using the closed territory arrangement, believe that they can discover the reason for the slump faster than if the man were not confined to one area. These sales managers know where the man is working and they know that area so their counsel can be more helpful.

3. *New salesmen are easier to get.* When a salesman with a good sales record is considering coming with the company, these dealers have found that the salesman is attracted by the offer of a territory of his own to work. That salesman will know that he will get leads even though he is new and he will also know that he will get sales help because the company will want its share of the business from the territory.

4. *More balanced sales are possible with closed territories.* A man working a comparatively small area finds it more convenient to follow up oil business along with the "big ticket" oilburner sales. Because he is not rushing all over town, he has the time to make the necessary calls that may be put off. Beyond that, quotas can be set up more easily for all the products the dealer handles when a man has a closed territory. They can also be set up more fairly because one territory may have more potentiality for some products than for others.

5. *More profits are possible with closed territories.* Dealers having closed territories find that less salesmen turnover, fewer low sales producers and more balanced sales bring them a higher sales volume and a larger net profit.

For more profits they are quite willing to take the time and effort to administer the closed territory plan.

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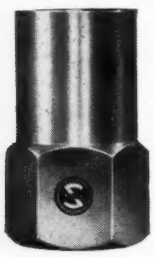

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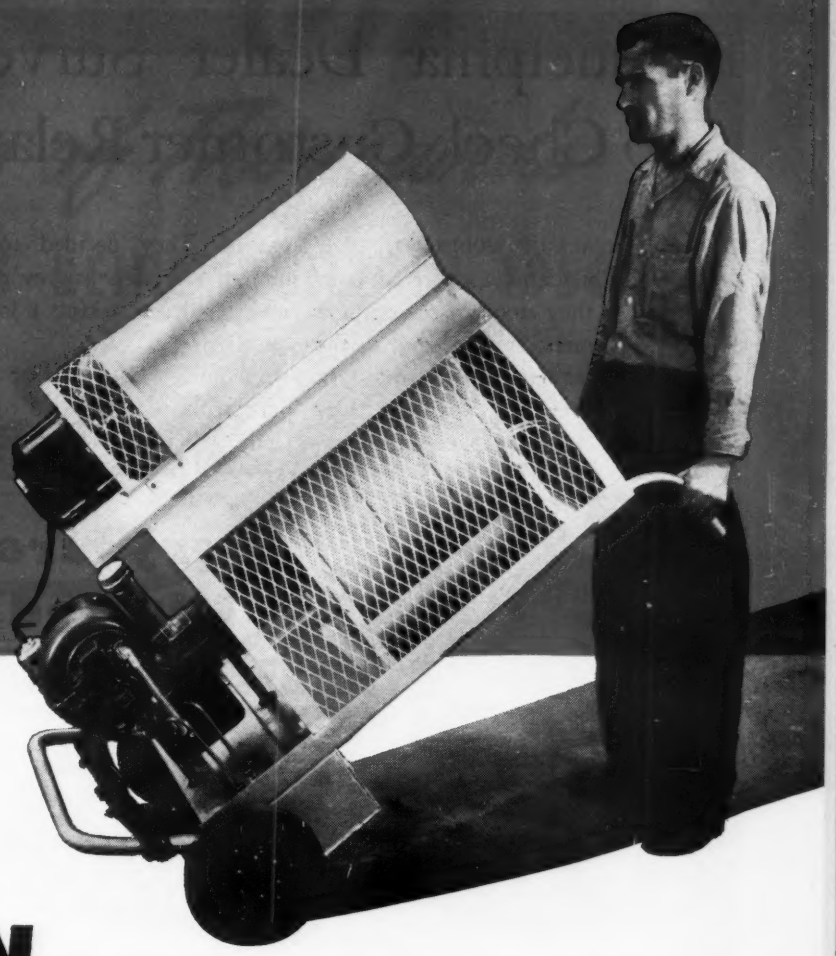

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Philadelphia Dealer Surveys To Check Customer Relations

THE OFFICIALS OF MODERN HEAT & FUEL CO., Philadelphia, were anxious to learn how they stood in the opinion of their customers, as compared to the standing of competitive companies. In other words, were they treating their folks as well or better than other companies? They decided to conduct a limited interview survey on a random selection basis, asking a lot of pointed questions.

A professional market research organization was retained to do the job. Only 100 interviews were to be made, one-third of which were to be with Modern's customers and the balance customers of competitors. A survey as small as 100 interviews would not at all be conclusive if the desired answers were numerical measurements, but as they were primarily psychological the small sample served the purpose, and it was economical.

As it turned out there were actually 38 interviews with Modern's customers and 62 with others.

The 100 oilheating users covered 35 different brands of burners, with 11 for the most popular brand among competitive makes. As to the age of the burners the oldest was 25 years, the median seven years. One-fourth were installed since the war.

Asked about frequency of service requirements, 64% said they hardly ever have to call a service man, 28 said once or twice a year and eight said oftener. Among Modern Heat's customers, 76% said hardly ever, 19% said once or twice a year and five per cent more than twice.

Householders were asked whether their service man comes of his own accord to make a pre-winter check of the equipment or whether he has to be sent for. 41% said they send for the service man, 40% said he comes of his own accord and 6% said the service man solicits this pre-season inspection work. Five owners do their own servicing.

Modern installations make a better showing on this question. 22 out of 38 Modern customers said their service man comes of his own accord and one said he solicits the work.

69% of those interviewed say that they are buying their furnace oil from the same people who service their furnaces. Approximately 76% of those listed as Modern customers buy their oil and their service from the same place. Five of the 38 Modern customers use other service men, two do their own service work and two did not know who does their service.

Householders mentioned 41 different companies as their source of supply for oil. Modern was named by all of its 38 listed customers. Atlantic was next with 7 homes, Timken third with 4, Gulf and Petrol had 3 each, eight firms had 2 mentions each and 28 firms had one mention apiece.

On the question of the length of time

Every drop filtered again and again!
FULFLO FILTERS
B4
UL
Fulflo FILTERS
REG U S PAT OFF
• FULFLO FILTERS give true depth filtration. Every drop of oil is subjected to many successive fine filtrations!
• FULFLO FILTERS lead all others in sales because they lead in performance . . . they do a better job!
• FULFLO is by far the best selling Oil Burner Filter because the great majority of Dealers everywhere have found by experience that they can depend on FULFLO to eliminate all trouble and expense arising from impurities in heating oils!
STANDARDIZE ON FULFLO!
Fulflo Filter CARTRIDGES
Engineered for Oil-Burner Service. Precision depth filtration. Every drop of oil finely filtered again and again.
COMMERCIAL FILTERS CORPORATION
BOSTON 27, MASSACHUSETTS
WRITE OR WIRE US IF YOUR JOBBER CANNOT SUPPLY YOU WITH FULFLO FILTERS AND CARTRIDGES FOR BETTER HOME HEATING.

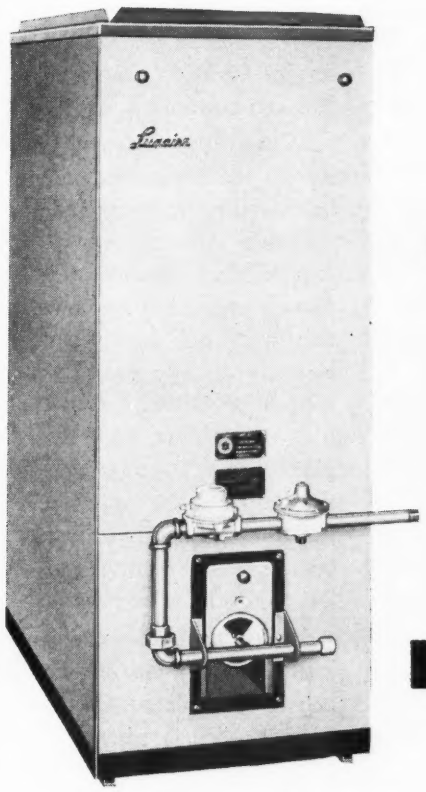
For the Tens of Thousands

OF SMALL HOUSES BEING BUILT IN 1950

SELL the Luxaire

No. G-80

GAS GRAVITY FURNACE



The No. G-80 Luxaire has been designed to give builders what they want in the way of heating, for their 1950 small houses.

It is gas fired—complies with the latest A.G.A. requirements.

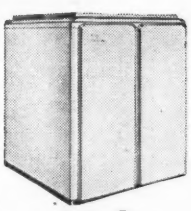
It has the heating capacity required by the majority of small houses.

It is shipped assembled, ready to have the burner and controls installed.

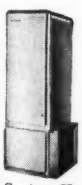
Finally, it is amazingly low in price. It carries the price, that gets the order.

Automatically welded by the submerged arc-welding process and with baked enamel casing No. G-80 can be supplied for any size project—from a dozen houses up to several thousand.

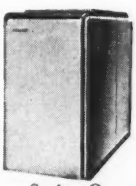
Series A
Gas-Fired
Steel Air Conditioning Unit with Vestibule and hinged door.



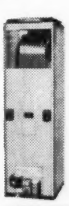
Series CA
Gas-Fired
Air Conditioning Unit, Cast Iron heating element.



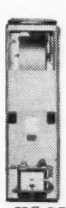
Series H
Gas-Fired
Utility Air Conditioning Unit. Available with Steel or Cast Iron heating element.



Series O
Gun, Oil-Fired Air Conditioning Unit. Steel heating element.

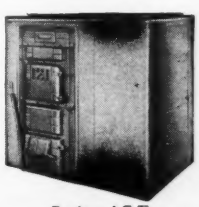


No. VHC-75-E
Vaporizing Oil-Fired Counterflow Unit.

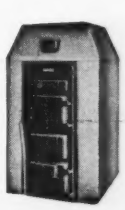


No. HC-95-E
Gas-Fired Counterflow Unit.

Series VA
Vaporizing Oil-Fired Air Conditioning Unit. Steel heating element.



Series AC-F
Coal-Fired Air Conditioning Unit. Steel heating element.



Series No. 700
Coal-Fired Gravity Furnace. Steel heating element.

THE C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

Luxaire HEATING & AIR CONDITIONING UNITS

the present brand of oil had been used, 50 out of the 100 households said from two to five years. Twenty-four have used the same brand from seven to ten years. Two homes said they have used the same oil for 13 years and two for 11 years.

Among Modern customers alone, 21 out of the 38 have used the same brand from two to five years and 12 have been loyal for from seven to ten years. The longest period mentioned was ten years, with three customers in this group.

Service was mentioned by 45 of the homes as their reason for using their present brand of oil. Habit was mentioned by 22, Friendship by 19 and combinations of the above three reasons by eight homes. Quality was given by only three homes, Price by two and Salesmanship by one.

Service, Habit and Friendship were the only reasons given by Modern customers. Service had 14 votes, Habit 14, Friendship seven and combinations of these reasons accounted for the remaining three customers.

The answers of householders indicate that there is considerable loyalty to their oil suppliers. Only 38 out of 100 admitted that they ever had changed their oil dealer. Twenty-nine said they had changed dealers at least once in the last ten years, while eight of the remaining nine who recalled changing had not switched dealers more than once in from 12 to 19 years. The most frequent switcher appears to be the household which has changed suppliers five times in 14 years.

The reason for changing suppliers which was mentioned most often was Friendship or Relationship, ten out of the 38 switchers giving this reason. Poor service during the oil shortage came next with 8 homes; unsatisfactory repair work or service had six votes; poor or dirty oil four mentions; supplier went out of business four mentions; and moved to a new neighborhood, two.

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Only three out of the 100 homes said that they ever had been given poor service by their present oil supplier. One Modern customer complained because oil was not delivered on time and another had trouble getting oil during the shortage (Modern). The third, not a Modern customer, also complained about late delivery. This is surprisingly little complaint and speaks well for the job the oil suppliers are doing.

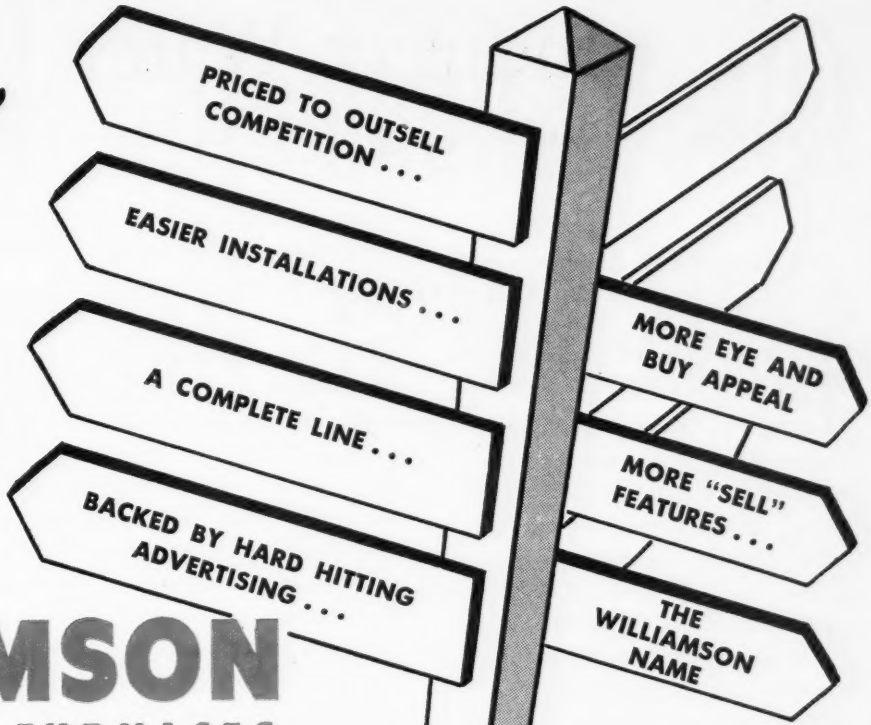
All of the 100 homes said they are receiving satisfactory oil from their present suppliers. Two said that present service is not satisfactory, one being a Modern customer.

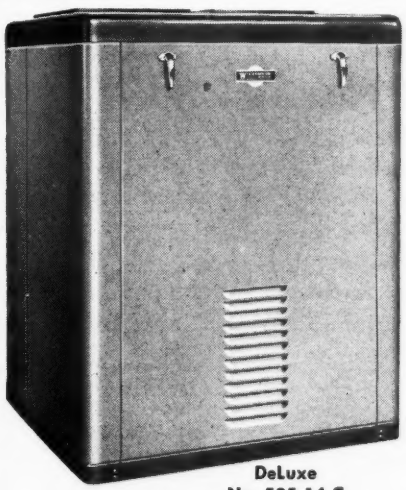
When asked whether there is any service the supplier should give which he is failing to perform, one Modern customer and five others said "Yes." The Modern customer thinks the company should clean his chimney. Among the others, one doesn't think he should be charged for priming his burner when it has stopped because of failure to deliver oil on time; another said his supplier wouldn't service a G-E burner; a third said his supplier doesn't do any repair work; one said no charge should be made for cleaning the burner; the last thinks he is overcharged for oil.

None of the consumers interviewed knew that the job was being done on behalf of Modern, but there were several unsolicited expressions about the company and its service, eleven in all. Four of these were unfavorable and three of those were from accounts that had switched to other suppliers. There were several laudatory comments about the company, such as . . . "They treated us right during the war" . . . "When they spilled oil on our grass, they sent men to clean it up and sow fresh seed" . . . "We like the oil Modern supplies much better than what we had before."

Often a business man encounters several complaints in a short time and concludes that his organization is falling apart—frequently says so with gestures. It would be an enlightening experience for any fueloil marketer to arrange for small random checks like this one at periodic intervals just for his own peace of mind. With only 100 interviews, enough for this purpose, the cost can't be more than a few hundred dollars and would be charged up as good will insurance.

7 ways to '50 Profits with WILLIAMSON OIL FIRED FURNACES

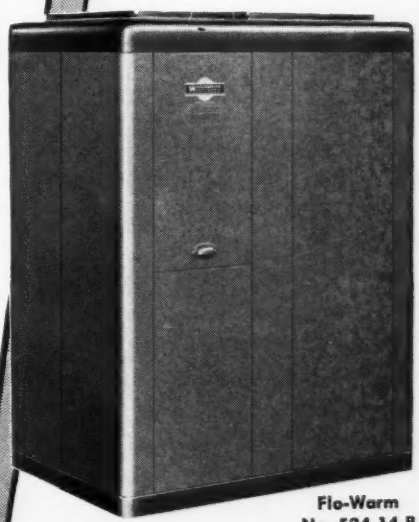

PRICED TO OUTSELL COMPETITION . . .
EASIER INSTALLATIONS . . .
A COMPLETE LINE . . .
BACKED BY HARD HITTING ADVERTISING . . .
MORE EYE AND BUY APPEAL
MORE "SELL" FEATURES . . .
THE WILLIAMSON NAME



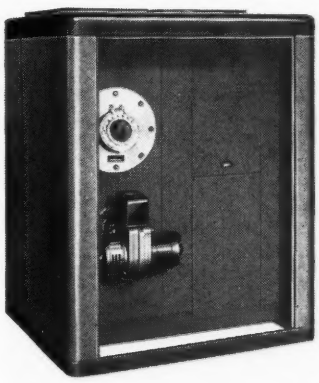
DeLuxe
No. 535-14-C
(open and closed views)

Built to sell and to satisfy by leaders in furnace design and construction for sixty years, WILLIAMSON Oil Fired Furnaces set the pace in the oil heating field. Designed from the customer's point of view in appearance and economy of operation, they also offer features for the dealer in ease of installation and trouble free operation.

Take furnaces out of the sales cellar with these profit stimulating WILLIAMSON Oil Fired Furnaces. Use the convenient coupon below for prompt, no-obligation details.



Flo-Warm
No. 534-14-B



In the DeLuxe Model, for example, WILLIAMSON Oil Fired Furnaces combine heating, filtering, humidifying and circulation in a compact, durably finished 20-gauge steel cabinet. Observation port and burner are mounted at front, covered by large, easily removed door. Standard equipment includes: refractory combustion chamber, oil burner, blower with motor and drive, acoustic board, filters, thermostat and cable, safety protection and draft regulator. Automatic drip humidifier is available as an extra.

Hiboy
No. 534-10-B

OUR 60th ANNIVERSARY

"Heat to your heart's content"

THE WILLIAMSON HEATER COMPANY
Dept. FO, Oakley, Cincinnati 9, Ohio
Please send literature and prices on your 60th Anniversary line of:

☐ Oil-Fired Furnaces ☐ Gas-Fired Furnaces
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Indirect Water Heaters

Application to Cast-Iron Sectional Boilers Requires Care

by
George H. Lippencott
and
George H. Lippencott, Jr.

THE INSTALLATION of indirect hot water heaters on cast iron sectional boilers must be made with care. Not only should the domestic water side be properly connected but the heater connections to the boiler and the boiler design must be given equal consideration.

Fig. 1, accompanying this article, shows a typical cast iron boiler section with a small port (1). This port is above the water line generally and does not permit circulation of the boiler water between sections. With this, or similar type sections, considerable difficulty will be encountered during the summer months from steaming because the boiler water is divided into separate sections in the high temperature zone and there is no overall control of the boiler possible.

Each section, in a boiler of this type, may be viewed as an entirely separate little boiler. Every one of these sections is capable of producing steam almost independently of the others. This condition actually does occur in cases where no attempt is made to tie the sections together and permit free circulation of the boiler water from one section to the other. So long as the boiler is only used for the production of steam there is no need to join the sections together for water circulation. The small port joins the steam space and control is obtained through steam pressure and steam circulation.

For year round heating and indirect domestic hot water supply, however, we must be able to control the boiler through boiler water temperature by means of an aquastat. To obtain control of the entire water volume we must tie *all* sections together by means of a header located just below the water line. If we leave even one section disconnected from the header, as shown in Fig. 2, (1), we have in effect a separate small boiler, uncontrolled, and capable of producing steam during the summer months. In addition to providing overall control, the header permits using the entire boiler water volume for producing domestic hot water.

Fig. 1 also shows a header (2) of an unsatisfactory type consisting of three nipples, an elbow, a union, and a heater tee. As you can see from the drawing, this header is dropped considerably below the water line and, consequently, the indirect heater is in a lower temperature zone. In order to get a satisfactory domestic water temperature it is necessary to raise the aquastat setting to 160° F. or 170° F. increasing fuel consumption and, in exceptional cases, even reaching the vapor point with heat entering the piping and radiation.

A more satisfactory header, such as shown in Fig. 2 (2) can be assembled by using nipples and slip joint tees, although care must be taken in tapping the sections to obtain alignment of the fittings and reduce strain in the sections. There are flexible slip joint header tees made that are simple to install and which eliminate strains caused by improper alignment and expansion. These fittings are preferred for the header, since a great deal of time can be saved on installation.

A header composed of nipples and tees, known as a "stiff connection," is to be avoided since strains set up on installation and magnified by expansion can cause cracked sections or leakage. With proper type headers, the indirect heater is easily located in the high boiler water temperature zone. The aquastat, which may be located in the header for best results, can be set at 140° F. for summer use, providing fuel economy and satisfactory water temperatures.

The boiler section shown in Fig. 3 has a large port (1) which is partially submerged below the water line. A boiler composed of such sections does not require a header since the boiler water is free to circulate through the partially submerged port in much the same manner as through a header. This type boiler need only be tapped at one point for satisfactory year round operation. Generally you will find the rear section provided with a tapping by the manufacturer, for the indirect heater. No external header is necessary.

A small amount of investigation to determine the type of boiler section and subsequent planning pay big dividends on year round indirect domestic water heating.

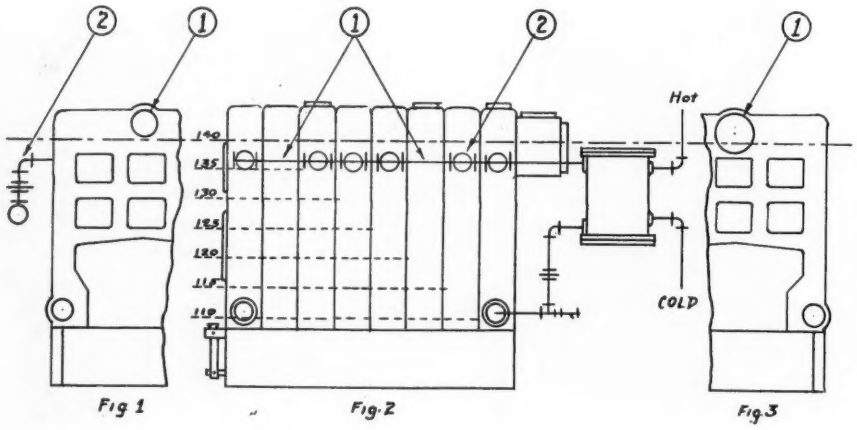

Fig 1 Fig 2 Fig 3

Henry C. Pierce has been promoted to manager, Washington sales office, American Radiator & Standard Sanitary Corp., Pittsburgh, Pa. He succeeds Thomas Hannah, Jr., recently transferred to the home office to head the central business contact department. Mr. Pierce has been with the company since 1941 and began his heating and plumbing career in its New York sales office.

If You Were an Automobile Dealer You'd Sell the Self Starting Make

As applied to vaporizing oil heating equipment, the terms "automatic operation" and "thermostatic control" are widely used but frequently misleading. The fact remains that:

1. By itself, *a thermostat does not light the burner in an oil fired unit.*

2. In a unit with a pilot light there is always a low fire burning.

3. All the thermostat does is turn the fire UP or DOWN in such a unit.

4. *With truly automatic operation the thermostat turns the fire ON or OFF.*

The fact remains that, of all the vaporizing oil heaters, oil furnaces and conversion oil burners on the market,

THE ONLY ONES THAT ARE TRULY AUTOMATIC ARE THE ONES THAT LIGHT THEMSELVES and they are manufactured by H. C. LITTLE BURNER CO., INC., SAN RAFAEL, CALIFORNIA

THE H. C. LITTLE WAY	A Thermostat	+	An Electric Oil Control Valve	+	Exclusive H. C. Little Electric Ignition	= TRUE AUTOMATIC OPERATION AND CONTROL
THE OTHER WAY	A Thermostat	+	An Electric Oil Control Valve	+	A Pilot or Low Fire Stage	= HIGH-LOW FIRE OPERATION

If you were an AUTOMOBILE DEALER and sold the ONLY make with a self starter (like H. C. Little electric ignition) while all your competitors sold makes that had to be cranked to start, or else leave the engine running (as in pilot fire operation), think what a swell spot YOU would be in.

When YOU start looking for a good, profitable vaporizing equipment dealership, look for H. C. Little – the self-lighting, self-starting MONEY MAKER.

H. C. LITTLE BURNER CO.

Baltimore, Md.
Belmont, Mass.
Boise, Idaho
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Fayetteville, N. Car.
Kansas City, Mo.
Larned, Kansas
Newark, N. J.
Portland, Ore.
Prescott, Ariz.
Reno, Nevada
Salt Lake City, Utah
Seattle, Wash.
St. Louis, Mo.
St. Petersburg, Fla.

Philadelphia Bans Oilfired Space Heaters in Tenements

FIRE MARSHAL KINGTON of Philadelphia has ruled that oilfired space heaters may no longer be installed in tenement and apartment buildings in the city. The ban applies to flue-connected space heaters as well as to portable, wick-type units, and a move already is under way to force the removal of heater units now in operation. Reporting the ruling, the *Philadelphia Inquirer* of February 5, says:

"Insisting that oil heating stoves are a serious fire hazard, Robert B. Wolf, chairman of the Mayor's Committee for the Coordinated Housing Improvement Program, announced yesterday that the fire marshal will ban all such heating devices from tenements and apartment houses as the first step in the housing rehabilitation drive.

"Because reduction of fire hazards is one of the important aims of the program, Fire Marshal George Kington will utilize his general police powers temporarily to force removal of oil heating stoves from all tenements and apartments.

"You want the money to live on? I'm afraid you'd have to put it to better use than that, Mr. Gibson!"

"So there may be no question of the fire marshal's authority, legislation banning these heating devices will be introduced in City Council in the near future. There is a possibility the ordinance may be rewritten to include private homes as well.

"The drive against oil heating stoves was confirmed at Kington's office, where it was pointed out that oil stoves for cooking purposes are now banned by the Board of Fire Underwriters as a fire menace."

Oilfired space heaters still are permitted in single family homes in the city.

Fight Westchester (N.Y.) Increase in Gas Rates

THE CITIZENS COMMITTEE of Westchester County, Opposing New Gas Rates, Inc., has been formed in the area immediately north of New York City to contest the present gas rates for house heating imposed by Westchester Lighting Company. The committee reports it is ready to send rate experts before the Public Service Commission to fight the present charges for gas service.

"We do not object to some increase in gas rates," says Milton D. Caffin, secretary of the organization of home owners, "but we do object to the excessive portion of the increase that the 18,000 families that heat with gas, out of 165,000 gas customers, are forced to pay." Printed literature issued by the committee reports that gasheating costs have been increased 70%, while rates for cooking are up only 19%.

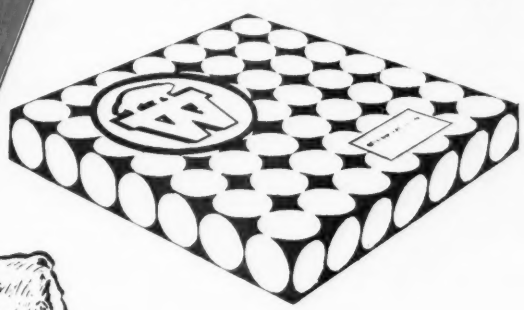
The "temporary" gas rate increase which became effective in July 1948, may become permanent next summer, according to the committee. They con-

Consider these Advantages

...when buying copper water tube

Wolverine tube is

available in step coil form—one continuous tube 60 feet long in two coils, one of which fits inside the other. It is soft throughout its entire length. Easy to bend. Easy to flare. Sizes within close tolerances.

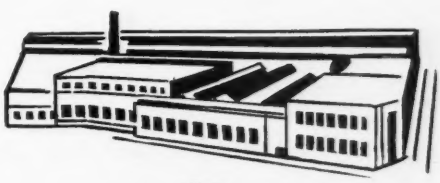


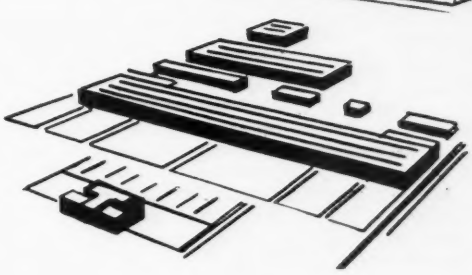
Wolverine tube is

individually cartoned. Easy to handle. Easy to stock and inventory. Easy to buy and sell. Easy to reship. Always protected against damage.

Wolverine tube is

manufactured by a division of the country's oldest producer of copper—Calumet & Hecla Consolidated Copper Company—backed by over a quarter-century of manufacturing of non-ferrous seamless tube exclusively—with strict adherence to quality-control from ore to finished product—produced in two great plants, one recognized as the world's most modern.





WOLVERINE TUBE DIVISION

CALUMET AND HECLA CONSOLIDATED COPPER COMPANY

MANUFACTURERS OF SEAMLESS NON-FERROUS TUBING

1445 CENTRAL AVENUE **DETROIT 9, MICHIGAN**

PLANTS IN DETROIT AND DECATUR, ALA.

Sales Offices in Principal Cities

tend the present rates became effective "by default" due to the inactivity and lack of proper representation by the various corporation counsels at the time hearings were being held before the Public Service Commission nearly two years ago.

◈

Burner Financed with Ten Millionth FHA Loan

THE TEN MILLIONTH property improvement loan, made by a private lending institution, and insured by Federal Housing Administration under Title I, has been recorded at FHA headquarters, according to Commissioner Franklin D. Richards. The first was recorded in the early days of August, 1934.

Application for the 10,000,000th loan of $375.00 from the Acquidneck National Bank of Newport, Rhode Island, was made through the Newport Oil Corporation for installation of a heating plant in a Newport home. The loan by Acquidneck was actually made late in December. Reports of such loans may be delayed for 30 days, so it was not until today that it was received and recorded in Washington for insurance.

The first such loan, made in 1934 was negotiated by the First National Bank of Cloquete, Minnesota, with a property owner who borrowed $125.00 to install a water plant, paint his house and repair the roof.

These ten million loans represent that number of repair or modernization projects under the Title I Plan with total loans amounting to approximately $4,000,000,000.

The loss on Title I loans amounts to about one percent of the net proceeds of all loans insured. Since mid-1939 FHA has charged a premium for insurance of these loans and at present the Title I program is self-supporting.

◈

Estimate Substantial Oil Reserves Increase

WHILE ACTUAL FIGURES covering the quantities of oil discovered by exploratory efforts of the petroleum industry in 1949 are not yet available, it is the consensus of leading geologists that substantial additions were made to proved underground reserves. At the beginning of 1949, the nation's proved reserves of liquid petroleum aggregated nearly 27 billion barrels. This represented a net gain over the preceding year of well over two billion barrels, even after the production in 1948 of over 2.1 billion barrels.

An estimated 7,250 "wildcat" wells were drilled by the petroleum industry in 1949, the greatest number in any one year since the discovery of oil in 1859, according to the American Petroleum Institute.

In 1948, the petroleum industry drilled 6,728 "wildcat" wells. Thus the estimated 7,250 drilled in 1949 represents an increase of eight per cent over the preceding 12-month period.

Oilmen are finding and developing new sources of oil supply in the United States at a two-to-one ratio over production, but the replacement costs are about five times greater than those experienced in pre-war years. For the most part, the industry is producing oil discovered in earlier years when oil finding costs were low. In other words, for every

THE STACK TEMPERATURE REDUCTION TELLS ITS STORY!

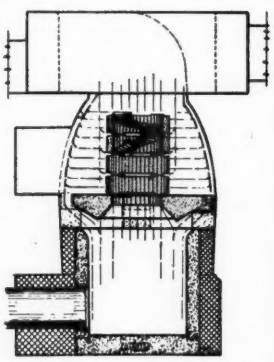
FRANKLAND
DIRECTIONAL FLOW CONTROL
FUEL CONSERVOR

★ Dealers — Here's a Profitable Heating Item! ★

for use with conversion burners

Tell your conversion burner customers about the Frankland Fuel Conservor. It's a money-saving story that will win you lasting customer goodwill, and your sales will get a healthy boost, too. The laboratory-tested and proved Frankland Fuel Conservor delivers hotter, steadier heat because it directs the super-heated gases to the point of contact where they are used for actual heating. The Frankland Fuel Conservor LOWERS STACK TEMPERATURE and brings homeowners savings up to 40% on their oil bills. Economically priced (the Conservor pays for itself within a few months), the Frankland Fuel Conservor is not a baffle, but a directional flow control. Easily installed. Also applicable to gas conversions.

Interested? — Then Write Promptly for Complete Information About This New Heating Sensation.



Scrubbing action against the sides and top of the furnace imparted to ALL the gases insures maximum heat transference to the house, not out the chimney.

A few large area warehousing distributorships are still available.

FRANKLAND CORPORATION
2640 GOODRICH AVENUE
FERNDALE 20, MICHIGAN

here's our new automatic engine controller

for engine driven pumps on delivery trucks, airport refuelers. saves time, steps, engine rpms.

Cut out running back and forth between engine and end of hose! Just lay out hose and start delivering immediately. SMITHway Engine Controller has a diaphragm which moves in response to varying pressures on outlet side of transfer pump. This movement is linked with carburetor throttle rod to give desired engine speed.

Engine operates at pumping speed only when actually pumping. At all other times it drops back to idling speed, thus saving gasoline and excess wear and tear. Operator makes one trip to lay hose, deliver and return to truck. No more wasted steps back and forth!

Easy to install in two hours or less. Will pay for itself in a few months. Solves many of the control problems of combustion engines, not only in tank trucks but in other types of installations. Get complete information from your local Smith representative. Write for bulletin No. 154.

Only $38.00 each, less in quantities.

A.O.Smith

Corporation

METER DIVISION

FACTORIES • 5715 SMITHWAY ST., LOS ANGELES 22, CALIF. • P. O. BOX 500, SUCCASUNNA, N. J.

Sales Offices: New York, Chicago, Houston, Los Angeles. In Canada: Toronto, Vancouver. International Division: Milwaukee 1, Wisconsin. Local Agents in all Principal Cities.

dollar's worth of oil taken out of the ground the industry must put $5.00 back into the ground as replacement cost.

◈

Dwelling Construction at All-Time Peak in 1949

AN ALL-TIME RECORD of 1,019,000 new nonfarm dwelling units started was set in 1949, the U. S. Labor Department's Bureau of Labor Statistics reported. This total is almost 9% above the previous high mark of 937,000 units established in 1925. The over-a-million mark was achieved because housing activity, which reached a peak in September with 102,900 starts, maintained a record breaking pace throughout the fall and winter months. The preliminary December figure of 79,000 units was the highest on record for the month since 1939, and 34% greater than the previous December high set in 1947.

The 983,700 privately financed units started in 1949 (96% of the total) represent a rise of about 8% from 1948. Public housing, financed largely by State and local agencies, almost doubled between 1948 and 1949; 17,800 public units were begun in 1948 compared with 35,300 in 1949.

The average construction cost of all privately financed 1-family houses started during the third and peak quarter of last year (the latest period for which data are available) was $7,625, $400 below the figure for the same months in 1948. This decline reflects a drop in costs as well as construction of somewhat less expensive dwellings.

◈

Water Heater Use and Fuel Preference Shown

WATER HEATER FUEL now in use and preference if users were to "buy a new water heater today" are shown in a mail survey to the list of *Household*, a Capper publication. Questionnaires were mailed to every 200th name on the list without any pre-selection, and the first 4,000 returns were used in tabulating the results.

It was found that utility gas now is the most popular fuel for water heating with 36.2% of the total, but only 31.8% would buy a gas water heater if they were to get a new one. Electricity was used by 20.5% of the families, but 45.0% would buy it now. LP gas shows the only other gain in desirability from 4.9% at present to 6.6% if a new water heater were being bought.

Of the 4,000 returns tabulated, 6.7% say they now are using oil to heat water, but only 4.6% would buy an oilfired water heater again. Coal now has 9.9% but only 1.5% want it. There were 7.4% using "furnace coils" for hot water, but no breakdown is shown between indirect heaters and firebox coils.

Average age of water heaters was five years.

There were 19.1% of the 3,473 families that answered the question, "Do you have a shortage of hot water on wash day?" who said they did experience such a shortage.

◈

Asks Development of Shale Oil Production

SHALE OIL represents the most promising source of liquid fuels for the Pacific

GENERAL FUEL OIL FILTERS ARE SURE FIRE
General FUEL OIL FILTER DELUXE MODEL 2A-300
Deluxe Model 2A-300
Jumbo size for large systems or dirty tanks.
A General Filter on every oil burner installation is one way to insure against fires going out due to clogged nozzles. Dirt, due to oxidation, will gradually accumulate in every tank so that the older the installation, the more need for a General Filter. Contact your jobber or write direct to the factory for additional information on sizes, prices, and discounts.
General FUEL OIL FILTER MASTER MODEL 2A-700
Master Model 2A-700
Adequate capacity for average to large size homes.
General FUEL OIL FILTER STANDARD MODEL 1A-25
Standard Model 1A-25
Ideal for small homes, space heaters, and hot water heaters.
GENERAL FILTERS INCORPORATED
GENERAL FUEL OIL FILTERS
12890 WESTWOOD AVENUE DETROIT 23, MICHIGAN
CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVE., TORONTO, ONTARIO

"Here's the name we can trust!"

SELL EASILY AND PROFIT HANDSOMELY! SELL TIMKEN SILENT AUTOMATIC, THE WORLD'S MOST-WANTED LINE OF AUTOMATIC HEATING EQUIPMENT!

- Different and better products that appeal on sight.
- Different and better advertising that works for you the year 'round.
- Different and better sales plans and programs tailored to solve your local problems.
- Different and better business policies that are the ethical standard of the industry.

Don't envy the Timken Silent Automatic Dealer—be one! Write for franchise details today.

25 YEARS OF LEADERSHIP 1925 1950

TIMKEN
Silent Automatic
HEAT

OIL • GAS • COAL

TIMKEN SILENT AUTOMATIC DIVISION
The Timken-Detroit Axle Company • Jackson, Michigan

Accepted S A Standard
TRADEMARK REGISTERED

PLANTS AT: DETROIT AND JACKSON, MICH. • OSHKOSH, WIS. • UTICA, N. Y. • ASHTABULA AND KENTON, OHIO • NEW CASTLE, PA.

fuel oil & oil heat

Coast when existing petroleum reserves are exhausted, S. H. McAllister, associate director of the Shell Development Company's Emeryville Research Laboratories, said at a February 13 meeting of the California Section of the American Chemical Society.

Ample petroleum is still available, Mr. McAllister emphasized, and there is no need to build commercial shale oil plants as yet, "unless it could be justified on strategic grounds." He urged, however, that development work be continued so that the best methods of obtaining and refining shale oil can be determined in time to be pressed into use when necessary.

"The present margins between the costs of discovering and exploiting new petroleum fields and preparing oil from shale are not so great as to make the latter impractical or visionary, and it can be expected that these margins will be narrowed," Mr. McAllister said.

At present it looks as if oil from shale has better economic possibilities than oil from coal—for the Pacific Coast, at least—although future research may change this, Mr. McAllister said. Synthesis of gasoline from natural gas, although soon to be practiced on a commercial scale in Texas, does not seem so promising in the long run because the supply is limited and the raw material already is a premium fuel, he added. Recent estimates put the cost of shale oil, piped to the Los Angeles area, at about $2.50 a barrel, he reported.

"Would you please skip in and out of the directors' room a couple of times this afternoon, so we'll have something to discuss?"

MONARCH

OIL BURNER ACCESSORIES ARE DESIGNED FOR BETTER PERFORMANCE

MONARCH OIL NOZZLES

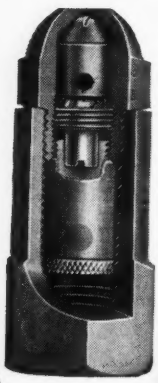
Most any nozzle will produce some kind of a fire, but—until you have tried Monarch Stainless Steel Nozzles (of a type with spray characteristics matched to your air mixing equipment) you won't know how good they really can be. Advise make of burner and sketch or accurately describe air mixing head and make test YOURSELF with the series Monarch Nozzles we recommend.

Monarch Combustion Head

The Monarch G-74 Head embodies an entirely new approach to efficient means for intimately mixing air with atomized oil to provide a highly efficient controlled flame.

Note these features:

1. Suitable for capacity sizes from .75 GPH to 2.50 GPH.
2. Simple to install and there is no "guess work" about the settings.
3. Price—Less than the cost of a good fuel unit.



F-80

Monarch Air Cones and Stabilizers

Numerous field tests on various well known makes of burners have proved Monarch equipment to be superior.

Pulsation can usually be overcome by using special stabilizers H-451 with standard F-57 cones and F-80-R 80° nozzles.

Write for new Circular No. 51849 on our "Anti-Pulsation" equipment.

Write for Catalog D

MONARCH MFG. WORKS, INC.

2503 E. ONTARIO ST.

PHILADELPHIA 34 PENNA.

European Distributor: A. Coutau, Rue de la Scie No. 16, Geneva, Switzerland

U. S. Department of Labor Fueloil Prices (December)

FIELD INVESTIGATORS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various suppliers in each market, the prices are averaged and published. Those in the table that follow were taken December 15 (cents per gallon):

	Range	*No. 1*	*No. 2*	*No. 3*
Boston	13.47	13.25	11.90	..
Manchester	14.20	13.70	12.60	..
Portland, Me.	13.30	13.30	11.90	..
[3] Buffalo	13.94	..	12.93	12.93
[1] New York	..	..	12.02	..
Philadelphia	..	12.02	11.58	..
[1] Chicago	13.20	12.85	11.93	11.93
[4] Detroit	..	13.90	12.88	..
Milwaukee	..	13.30	12.40	12.30
[1] KansasCity	..	11.93	10.91	10.91
Minneapolis	13.17	12.93	11.62	11.93
[1] Baltimore	..	12.04	11.63	..
[1] Wash., D. C.	..	12.51	12.04	..
Jacksonville	..	13.03	12.52	..
Norfolk	..	12.10	11.00	11.00
Richmond	..	12.50	11.22	..
[2] Savannah	..	13.70	12.60	..
[5] New Orleans	..	13.34	12.36	12.36
Portland, Ore.	..	13.94	11.64	6.55
[6] San Francisco	..	13.77	11.44	6.48
[4] Seattle	..	14.77	12.65	6.74

[1] Prices include 2 percent tax.
[2] Inspection tax of one cent per gallon included on kerosene only.
[3] Prices include 1 percent tax.
[4] Prices include 3 percent tax.
[5] Prices include 3 percent tax on all fuels except gas; prices for kerosene and fuel oil No. 1 also include one cent per gallon State health tax, and 1/32 of one cent per gallon State inspection tax.
[6] Prices include 3.5 percent tax on all fuels except gas.

MONCRIEF SUREFIT FITTINGS

Now Packaged for

Moncrief now eliminates the "bug-a-boo" of *"damaged"* . . . "Out-of-shape" fittings, with a complete line of Surefit Fittings that are *"CARTON-PACKED."*

"CARTON-PACKED" Fittings reach their destination in *perfect* condition—NOT shop-worn, NOT rusty, NOT out-of-shape.

"CARTON-PACKED" Fittings are easy to handle —warehouse space is used to greater advantage and is easily kept ship-shape. No more old-fashioned basket trucks and bin storage with "CARTON-PACKED" Surefit Fittings.

All Surefit CARTONS are plainly marked as to their contents. Warehousing—shipping—ordering and inventory become unusually simple, quick operations.

Write for a copy of the NEW, complete catalog of Moncrief SUREFIT Fittings for Gravity and Forced Air heating installations.

THE HENRY FURNACE COMPANY

Medina, Ohio

HEATING AND AIR CONDITIONING UNITS — MONCRIEF SINCE 1895 — FURNACE PIPE AND FITTINGS

Manufacturers Activities

De Soto Sales Training Starts At Philadelphia

THIRTY NEW SALESMEN attended the first of a continuing series of sales training sessions inaugurated by the De Soto Oil Burner Corp., York, Pa. The week-long training school was held at Philadelphia late in January with R. F. Horan, De Soto sales manager in charge.

General view *of the salesmen who attended the training session at Philadelphia, the first of a series to be sponsored by De Soto Oil Burner Corp. Standing in the center of the group are R. F. Horan, sales manager, who conducted the sessions and E. I. Kraber, president.*

This is one of the first attempts to recruit and train new oilheating salesmen on a sizable scale since the start of the war. The men all had been recruited for De Soto dealers in the Philadelphia-Camden-Trenton area.

"It is not enough to supply dealers with a good product at a reasonable price," explains E. I. Kraber, president of De Soto. "Dealers need well-trained specialty salesmen if they are to get the business they want. This is an expensive and specialized job for any individual dealer, but can be done for a group of dealers successfully and at less cost."

The entire sales recruiting and training program is in the charge of Mr. Horan. In five days the school covers heating systems and accessories, fueloils and competitive fuels, and oilburner types. This mechanical training takes two days, after which there are three days of sales training.

Prospecting is covered with particular emphasis on some new tools that the company has developed. The presentation and features of the De Soto line are taught with particular stress on the use of new sales literature and selling booklets. The close is taught as a psychological process.

"These schools will be held for all our dealer groups as often as there is a need," says Mr. Horan. "This is a continuing program which we have established to bring new sales blood into the industry."

There is only ONE

TRADE MARK REGISTERED

Draft-O-Stat

BAROMETRIC DRAFT CONTROL

AND HOTSTREAM MAKES IT!

OVER ONE MILLION

SUCCESSFUL INSTALLATIONS

New Model "B" (illustrated) now available in 6, 7, 8, 9, 10 and 12 inch sizes. Write for Bulletin.

THE HOTSTREAM HEATER CO.

6925 QUINCY AVENUE • CLEVELAND 4, OHIO

Rochester Mfg. Pushing Warm Air Thermometer Kits

DESCRIBED as a campaign to upgrade the efficiency of warm air installations, Rochester Mfg. Co., Rochester 10, N.

Y., is conducting an advertising and direct mail campaign impressing upon dealers the importance of balancing properly warm air heating systems. To assist them in doing this, the campaign features the company's circulation air control thermometer kit and outlines briefly a program dealers can inaugurate to solicit balancing jobs.

The kit consists of three 2" dial thermometers with 9" stems, with dials ranging from 30 to 240 degrees F. Use of the three thermometers permits a quick and accurate check of temperatures at the warm air supply duct, return duct, blower switch and burner limit control. Each thermometer has a tapered bushing on its stem, making it self-supporting, and leaving an operator's hands free to make adjustments, as needed.

General Controls Branch Office in Newark, N. J.

ESTABLISHMENT of a branch office in Newark, N. J., has been announced by General Controls, Glendale, Cal. J. F. Ray, vice president in charge of sales, reveals this is the company's twenty-second branch office and will include extensive warehouse facilities.

Located at 721 South Orange Ave., Newark 6, N. J., will be managed by William Buck, formerly sales engineer at the Philadelphia branch, and will stock a complete line of automatic pressure, temperature level and flow controls.

Other organizational changes include the appointment of R. M. Korty as branch manager at St. Louis; the addition of Robert L. Day to the San Francisco sales engineering staff and the naming of Rudolph J. Roedder as refrigeration specialist in the Los Angeles sales office.

Winkler Holds Successful National Sales Convention

SUPPLEMENTING A CUSTOM of conducting regional meetings each year throughout the country, U. S. Machine Corp., Lebanon, Ind., sponsored its first national convention at Indianapolis early this year. Executives were highly elated when 600 of their 1,500 retailing distributors, representing 43 states, at-

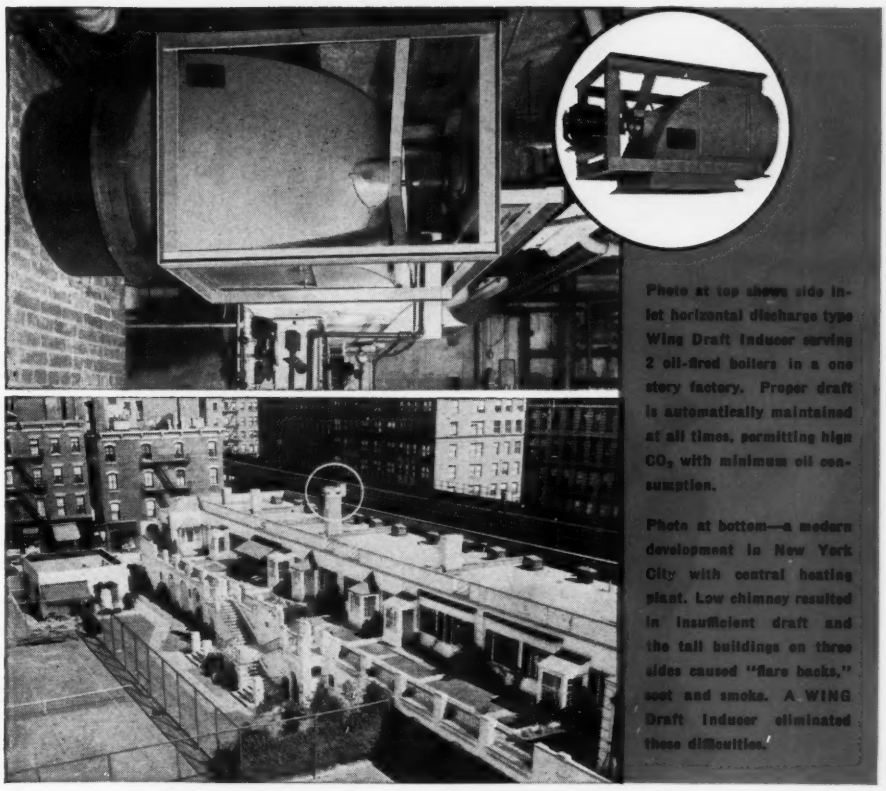


Photo at top shows side inlet horizontal discharge type Wing Draft Inducer serving 2 oil-fired boilers in a one story factory. Proper draft is automatically maintained at all times, permitting high CO_2 with minimum oil consumption.

Photo at bottom—a modern development in New York City with central heating plant. Low chimney resulted in insufficient draft and the tall buildings on three sides caused "flare backs," soot and smoke. A WING Draft Inducer eliminated these difficulties.

Positive Draft REGARDLESS OF WEATHER OR SIZE OF CHIMNEY

The Wing Draft Inducer provides a means for furnishing positive, uniform adequate draft for low pressure heating plants without the need for tall, unsightly, expensive stacks.

It permits operating at high efficiencies without regard to weather conditions.

Thorough and efficient combustion with high CO_2 content is assured. Smoke, gas and explosion hazards are reduced or eliminated.

L. J. Wing Mfg. Co.

General Offices and Factory:
66 Vreeland Mills Road, Linden, N. J.
Canadian Factory: Montreal

WING

Wing DRAFT INDUCERS

Don't Guess...

WEBSTER ELECTRIC Two Stage Fuel Units

Years of Manufacturing Experience Result in Quality...

More and more heating equipment dealers are learning, each year, that specifying Webster Electric Fuel Units has a direct bearing on profits and customer satisfaction. Those dealers have learned through experience that Webster Electric fuel units are quiet running, give constant pressure and trouble-free performance. Service calls and complaints are held to a minimum. Parts are interchangeable and easy to install.

These facts combine to build dealer profits . . . that's why it pays to specify quality when you buy. Ask for Webster Electric fuel units on the next equipment you order.

WEBSTER ELECTRIC

Webster Electric Company, Racine, Wisconsin • Established 1909

"Where Quality is a Responsibility and Fair Dealing an Obligation"

Indiana's *Governor Henry F. Schricker congratulates Carl J. Winkler, president, on the 13th anniversary of the U. S. Machine Corp. In the background are Herman E. Winkler, executive vice president; Maurice F. Winkler and Walter N. Winkler, factory superintendents.*

tended. Two hundred arrived a day early to visit the company's three plants. Expanding the convention theme, "1950—the Salesman's Year," many new products and an aggressive merchandising program were presented by top management.

Indiana's Governor Henry F. Schricker welcomed the visitors and congratulated the four Winkler brothers, Carl J., president, Herman E., executive vice president, Walter N. and Maurice F. Winkler, factory superintendents, on their 13th anniversary in business, manufacturing heating products bearing their name. He pointed out that this segment of one family has an aggregate of 141 years of experience in machine and engineering skill.

Some of the country's outstanding sales personalities, including Dr. Frank C. Hockema, vice president of Purdue University, the Rev. Lex King Souter, noted human relations counselor, and LeRoy B. Fox, manager of the fueloil division of Socony-Vacuum Oil Company, addressed the two-day meeting. The oil supply appears plentiful for many years to come, with the new Canadian field being one major factor, Fox asserted.

New equipment displayed included three oilfired furnaces, boilers for the revolutionary Winkler low pressure oilburner; horizontal rotary cup oilburners, ranging in capacity from 4 to 70 gph, to burn both light and heavy oils, including those that need preheating; seven models of gas conversion burners, ranging up to 300,000 BTU capacity, for all gases; and wall furnaces for both

oil and gas, developed for the small homes industry. Among stoker improvements announced was a variable speed drive for Winkler industrial units.

An L-3 model has been added to the low pressure oilburner line, and radical improvements made in the Winkler high pressure burners. The H-8 and H-15 are now equipped with 2-stage pumps with electric solenoid cutoff valve, and the H-15 has dual ignition.

Participating in the various convention sessions were Herman E. Winkler, Claude A. Potts, vice president in charge of sales, Walter E. Blake, national sales supervisor; Phil C. Kosch, regional supervisor, eastern territory; Robert C. Hulse, sales promotion manager; Norman J. Gill, advertising director, and Al H. Wynkoop, public relations director.

Supplement Issued to Sid Harvey Catalog

A SUPPLEMENT to the Fall 1949 issue of the catalog prepared by Sid Harvey, Inc., Valley Stream, N. Y., contains 28 pages and includes information and new products added recently. The supplement shows trade prices of each article when bought new and the trade price for rebuilding, where applicable. Information is supplied on Detroit Lubricator float valves and power burner controls, Penn oilburner controls, White-Rodgers gas controls and pilots and some fifty other parts that are used in the service and installation of heating systems.

The supplement is available without charge to anyone in the trade who requests a copy on his business letterhead. Firms on Harvey's regular mailing list are to receive copies automatically.

York-Heat Holds Annual Distributor Convention

THE ANNUAL DISTRIBUTOR CONVENTION, held by York-Shipley, Inc., York, Pa., was attended by one hundred and fifty representatives of York-Heat distributors. A three-fold program was presented, with the daytime program held at the Valencia Hotel and a banquet taking place at the Country Club of York. A display of all products manufactured by the Residential Division was set up at the Valencia, to include fifty-three models of home heating and hot water heating equipment.

Specify Quality

WEBSTER ELECTRIC Transformers

Quality Products Dealers Can Depend On . . .

Among the men who sell and install oil heating equipment Webster Electric Ignition Transformers have earned an enviable reputation for service. Consistently, year in and year out, their trouble-free operation has placed them in a position of favor with dealers who realize the importance of customer satisfaction.

This dependability, plus the adaptability of Webster Electric Ignition Transformers to any oil burner installation, means fewer complaints, fewer service calls . . . and more profits for you.

Don't guess about quality . . . do as many others have done . . . specify Webster Electric.

WEBSTER ELECTRIC

Webster Electric Company, Racine, Wisconsin • Established 1909

"Where Quality is a Responsibility and Fair Dealing an Obligation"

A morning session, devoted to markets, featured presentations by J. G. Gilmore of Columbus, Ohio; Edward Martin, National Gas Appliance Marketing Association and Robert Gray, FUELOIL & OIL HEAT. S. L. Shipley, president, York-Shipley; L. H. Brenneman, executive vice-president and Ralph Fisher, legal counsel, also participated. Dave Wepman, merchandising manager, was in charge of an afternoon session, which presented the company's 1950 merchandising program. Speakers at the session included M. J. Culligan, *Good Housekeeping* Magazine; L. J. Studnicky, York's director of sales training and C. A. Neiman, chief engineer. Components of the program also were displayed at the Valencia.

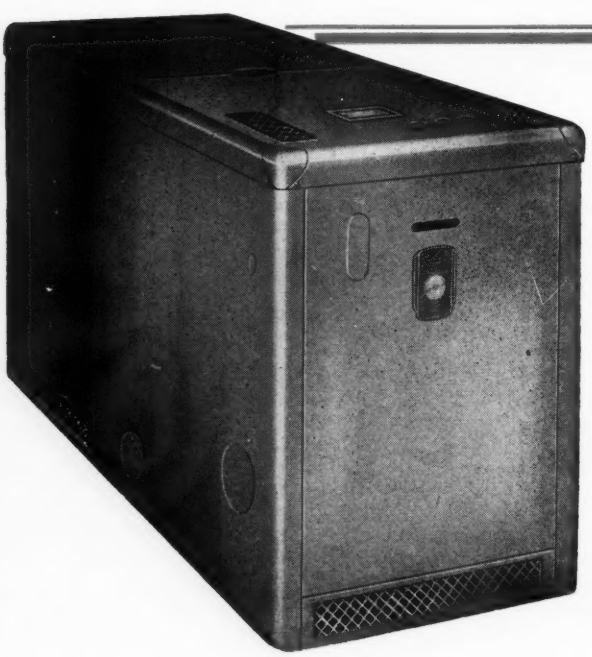
Honored at the banquet were distributors and wholesale representatives who have done an outstanding sales job during the past year.

Swedish Co. to Manufacture Oil-O-Matic Burner

M. V. STAGG, assistant to the president, Eureka Williams Corp., Bloomington, Ill., flew to Stockholm, Sweden, on January 7 and returned a week later, having completed arrangements for the manufacture of the Oil-O-Matic low pressure oilburner in Sweden for distribution in that country, Norway, Denmark and Finland. The burner will be made by Ljungmans Mfg. Corp., Malmo, Sweden, under a submanufacturer plan set up by Eureka Williams and its distributor, Hugo Tillquist, Stockholm.

The burner is to be made under Oil-O-Matic supervision and specifications and will be sold throughout the Scandinavian countries under the trade name, "Williams Oil-O-Matic."

The Bethlehem DYNATHERM offers You ALL THE FEATURES THAT MAKE YOUR SALE EASIER!



Whirling Flame

Extracts every bit of useful heat from every last drop of oil, assuring big savings on fuel bills!

Unit Engineering

Design and construction as an integral unit results in far greater heating efficiency.

"Thermos Bottle" Insulation

Radiation and heat loss are minimized throughout the non-heating season.

Beautiful Cabinet

Duotone baked enamel cabinet with chromium hardware will blend perfectly with the other surroundings.

• FREE literature and newspaper mats available to all Dynatherm dealers.

And despite the DYNATHERM'S outstanding advantages it costs amazingly little more than converting an old boiler!

A few exclusive Bethlehem Dynatherm territory Franchises are still available. Wire or write immediately for full information.

BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM PENNSYLVANIA

Perfection Stove Adds Five Salesmen in Three Districts

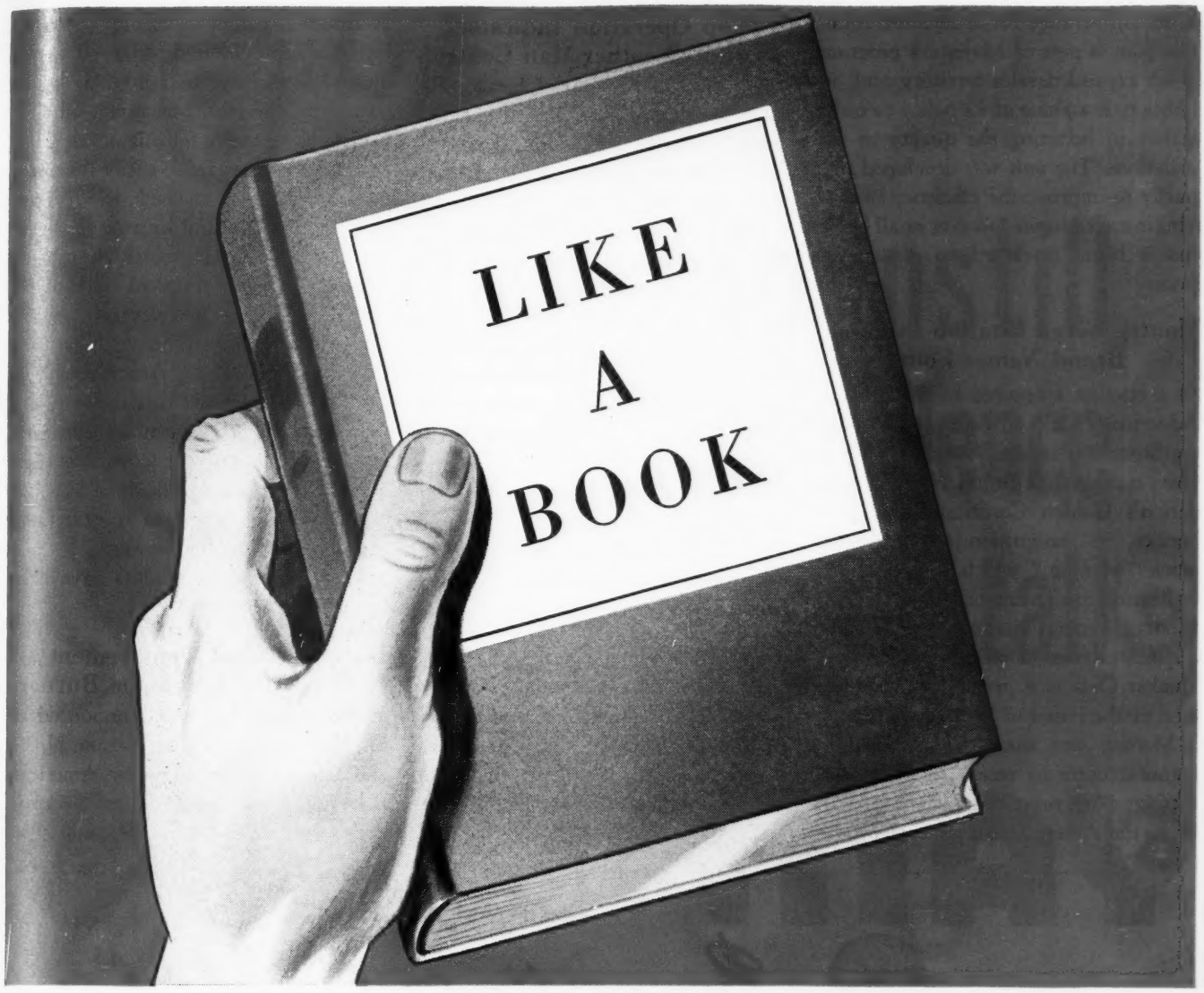
ADDITIONS to its sales staffs in three districts have been announced by Perfection Stove Co., Cleveland 4, Ohio. Max W. Nowotne has been added to the staff of the company's Chicago district, serving under F. T. Stahl, district manager. In the Kansas City, Mo., district, W. R. Heap, Jr. and W. F. Leuszler have been added. Mr. Leuszler had been chief clerk in the Kansas City office.

The final two additions were made in the Atlanta district, where Phil J. Pearce and Arthur Harrison, Jr. have joined the sales staff of C. C. West, district manager. Mr. Pearce's background includes experience in the hardware business; Mr. Harrison was employed by Railway Express for ten years before joining Perfection.

Majestic Utility Furnace Shown on Demonstrator Truck

A DEMONSTRATOR TRUCK, equipped by Majestic Furnace Co., Huntington, Ind., incorporates a display of its new model UF-26 gas or oilfired packaged, automatic, forced air utility furnace unit. It includes facilities to show different types of burners, particularly Majestic's new Perfect Flame oilburner. Through an observation window the action of the burner flame can be observed. Other features, such as compact size, drawer-type burner mounting, adaptability to up-flow or down-flow systems, can be demonstrated readily.

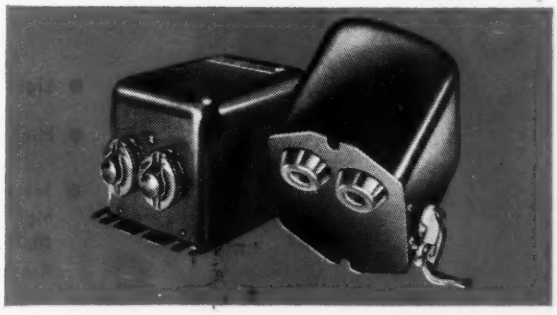
The truck is manned by a heating engineer, who travels with it at all times. Any dealer or contractor who wishes to



IT'S WHAT'S INSIDE THAT MAKES A BEST SELLER

• The cover of a best seller won't explain the pulling power of the story inside. Neither will the case of a Jefferson Transformer fully indicate the superior construction, workmanship and engineering. BUT the proof of a Jefferson Transformer's ability to perform dependably under exacting conditions lies in the popularity reflected through sales — initial and repeat.

Sound basic engineering, coupled with modern equipment and continuing research plus



8,144 years of specialized experience—THESE ARE THE INSIDE REASONS WHY JEFFERSON TRANSFORMERS ARE BEST SELLERS.

JEFFERSON ELECTRIC

TRANSFORMERS

JEFFERSON ELECTRIC COMPANY

Bellwood, Illinois

In Canada: *Canadian Jefferson Electric Co. Ltd., 384 Pape Ave., Toronto. Ont.*

fueloil & oil heat

do so can arrange for a demonstration. The plan is part of Majestic's program of an expanded sales territory and, in addition, is a phase of its policy to assist dealers in bettering the quality of installations. The unit was developed primarily to improve the efficiency of systems installed in the low cost small home and is being marketed on a national basis.

Montag Given Citation by Brand Names Foundation

AT A DINNER sponsored by the Oregon Advertising Club on February 1, Montag Stove & Furnace Works, Portland, Ore., received the Brand Names Foundation's Golden Certificate of Public Service, in recognition of the brand name "Montag," which has identified its heating equipment since 1880. Ralph Montag, general manager, received the certificate from Donald B. Douglas, Quaker Oats vice president and chairman of the board of the Foundation.

Montag was among eleven Oregon manufacturers to receive citations for fifty or more years of continuous service to the American consumer.

Develop Operation Indicator For Weather-Man Controls

AUTOMATIC DEVICES CO., Chicago, Ill., manufacturers of the "Weather-Man" outside temperature control, have prepared a pocket-sized dummy of their product, graphically illustrating the operation of the device in controlling building temperatures. It contains a moveable slide on which are shown the outside temperature, the time heating is to start in the morning, heating requirements in minutes per hour and the time heating shuts down each evening.

The reverse side of the indicator can be used to show how the control functions. The control dial, operation lever, micro-switch and temperature bulb are shown in detail and a bulletin, furnished with each indicator, provides a complete explanation of their operation.

Heating Devices Earn Patents for Two G.E. Men

TWO ENGINEERS of the General Electric Co., Bloomfield, N. J., have been awarded patents for developments in heating equipment. Aldo Macchi of the firm's Air Conditioning Dept., has been awarded a patent covering a burner head for use in oilfired boilers. It covers improvements which provide better cooling of the electromagnetic oil flow control valve and atomizing nozzle parts and permits them to be easily removed, disassembled and cleaned or repaired. In addition, an oil and air pressure atomizing nozzle structure, which can be varied to provide different oil rates, is included. It is the eleventh patent awarded to Mr. Macchi.

Frank C. Brockman, Automatic Heating Div., earned his patent for a fan control device for warm air furnaces. His second patent, it covers a thermometal operated switch which responds to furnace temperatures to start and stop operation of the blower.

Both of the new patents have been assigned to the company.

Harvey Named Replacement Depot for Arcoflame Burners

APPOINTMENT has been announced of Sid Harvey, Inc., Valley Stream, N. Y., and associated companies by American Radiator & Standard Sanitary Corp., Pittsburgh, Pa., as field replacement de-

Bryan offers a Completely

PACKAGED BOILER

designed for radiant heating of small homes and apartments

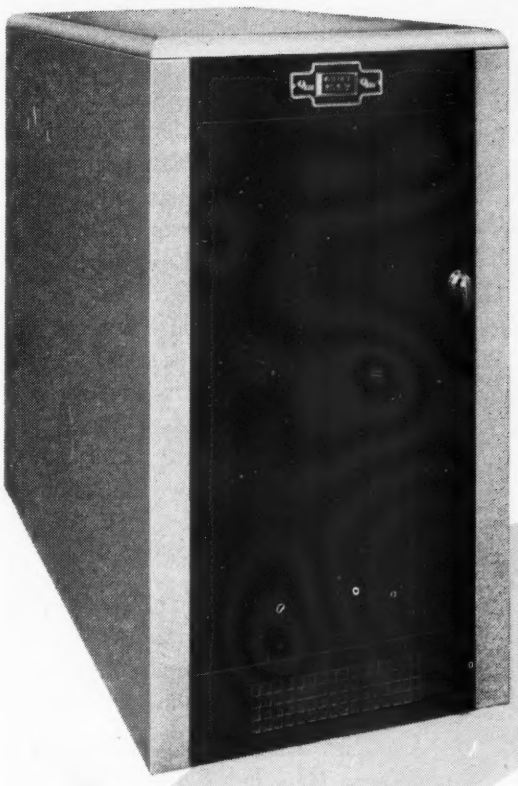
- Light in weight.
- High efficiency copper tubes.
- Measuring but 31" wide, 41" high and 18" deep, it delivers 70,000 BTUs. Also 100,000 BTU size available.
- Green hammerloid finish.
- Oil or gas firing optional.
- Easily installed—all wiring, piping and controls assembled at factory—ready for use after connecting to water, mains, electricity and fuel lines.

OIL OR GAS FIRED

Built to ASME specifications.
Send today for complete information.

BRYAN STEAM CORP. 130 Chili Pike • Peru, Indiana

BRYAN *Copper Tube* **BOILERS**



Quiet MAY
Boiler-Burner
Unit

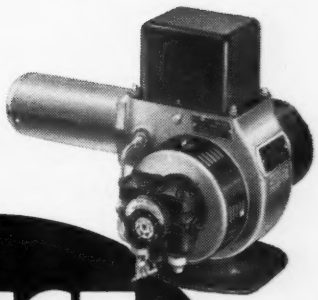
To instill confidence ...install

QUIET MAY

When you install Quiet MAY oil heating equipment, you instill the kind of confidence that keeps building your business . . . year after year.

For Quiet MAY is a respected name everywhere. On a conversion oil burner . . . on a boiler-burner unit . . . on a warm air furnace . . . it inspires your customer's confidence in the soundness of his investment. Quiet MAY's performance, end-product of 26 years of engineering advancement, unfailingly justifies that trust . . . constantly broadening public confidence in you.

Hundreds of Quiet MAY dealers have sales records to prove the point. Why not prove it to yourself?



Quiet MAY
Conversion
Burner

QUIET MAY OIL BURNER

OHI

MAY OIL BURNER division of Gerotor May Corp., Baltimore 3, Maryland

fueloil & oil heat

pots for Arcoflame oilburners. Each establishment will make immediate replacement of any defective part, within the warranty period, without charge. Also, they will rebuild or exchange parts that need normal replacement.

Super Electric Products Moves to Larger Quarters

REMOVAL of its general offices, including the purchasing department, has been announced by Super Electric Products Corp. Formerly located at Jersey City, the firm now occupies larger quarters at 46 Oliver St., Newark, N. J. The move was completed on February 6, with some of the divisions of the company remaining at the previous location.

Topflight Tape Offers "Door Opener" Sales Plan

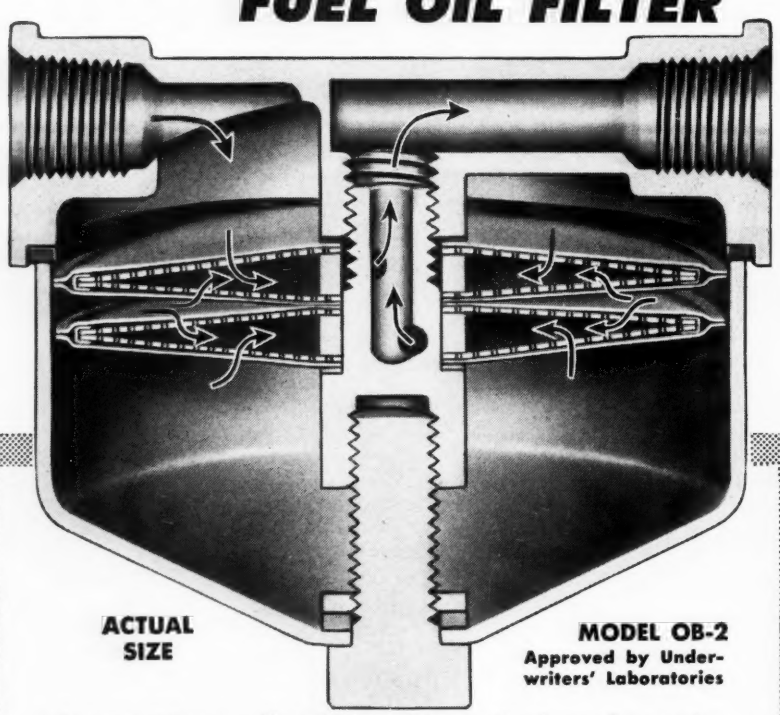
A PLAN, offered by Topflight Tape Co., York, Pa., consists of a package containing everything necessary for a compilation of sound sales possibilities. Protected by a series of copyrights, the plan is referred to as a merchandising method prepared and tested by experts to permit a salesman to enter prospects' homes with a free service. A complete script for the salesman's opening and follow-through is provided, along with other material with the dealer's imprint.

The plan is being offered on an exclusive basis in each geographical business area at a cost of less than ten cents for each home serviced, according to the announcement. Franchise holders will be furnished the plan, the sales presentation, all printed and servicing material, follow-up outlines and report forms. Examination is permitted only during personal presentation by Topflight representatives.

A new departure in the principle of Fuel Oil Filtering

SPARKLER

FUEL OIL FILTER



ACTUAL SIZE

MODEL OB-2
Approved by Underwriters' Laboratories

A compact, low cost filter, built for big capacity, heavy duty service. The result of Sparkler's new concepts of design and engineering in the filtration field.

Surface type filtration is employed which provides a much larger effective filtering area within a small space. The non-woven rayon filtering element removes minute particles down to .001-.002 from the oil, separates water from the oil, and eliminates the possibility of loose fibres reaching the nozzle screen. The lower chamber forms a trap for water and heavy dirt and rust particles.

Flow resistance of the rayon filter element is very low with a resulting high flow rate for the filtering area. Each disc has a filtering area of 14 sq. in.

Model OB-2 has a flow capacity that easily handles the oil for a burner heating a 6 to 8 room house for a full season or more. Model OB-4 with four filter discs is double the capacity of OB-2 and Model OB-8 has four times the capacity of OB-2 and is designed for commercial oil burners.

No by-passing is possible because the filtering seal does not depend on springs or other resilient material. Only clean, pure oil can reach the nozzle screen, assuring a correct nozzle spray pattern without sputtering and complete efficient combustion.

WRITE FOR SPECIAL DEALER OFFER

SPARKLER MANUFACTURING CO., MUNDELEIN, ILL.

Member, Oil Heat Institute of America

◈

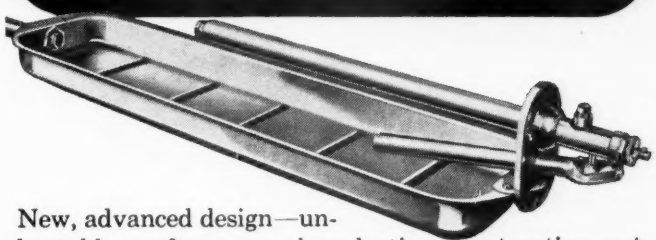
James H. Binger has been elected vice president and general manager, Belfield Valve Div., Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

E. Earle Heiland, well-known in the southern New Jersey and Philadelphia territory as an oilburner manufacturer's field man, has organized the Heiland Home Supplies Co., Marlton, N. J., to act as distributor for oilburners, furnaces, boilers, water heaters and other home appliances. Mr. Heiland, an old timer in the oilheating industry, has established a sales staff, headed by his brother, Ernest, which will call on dealers and jobbers in the area.

W. R. "Bill" Stockwell has retired after thirty-one years as general manager, Manufacturing Div., Weil-McLain Co., Michigan City, Ind. and Erie, Pa. He will continue with the company as honorary vice president in an advisory capacity. He began in 1895 with Lord & Burnham & Co. and joined Weil-McLain in 1919. During his tenure he served two terms as chairman of the Institute of Boiler and Radiator Manufacturers and for years has been a member of its executive committee.

A. B. MacLaren, assistant manager, Furnace Sales Dept., Perfection Stove Co., Cleveland 4, Ohio, for the fifth consecutive year is conducting the company's service schools. The first, held late in January, was attended by thirty-two service men, including a woman. Participants came from points in Ohio, Michigan, Wisconsin, Pennsylvania and Georgia and learned during the two-day conference recognition and correction of Superfex heating problems

12 PAN SIZES
FLEXIBLE INSTALLATION
THERMO-DRIP AUTOMATIC HUMIDIFIERS



New, advanced design—unbeatable performance—long-lasting construction put the 1950 Thermo-Drip in a class by itself. Easy to handle—quick to install—easy to regulate. In addition, the fast heating, stainless steel pans give almost immediate vaporization as water drips onto the hot pan surface. The flexible design makes the Thermo-Drip *easily adaptable to all warm air furnaces.*

FOOL-PROOF THERMOSTAT

Gives quicker, more positive action—easily regulated as desired—*enclosed valve orifice funnels drip;* prevents plugging of the valve, splashing or spraying. Simplicity of construction insures long life and easy servicing—minimum maintenance.

EASY TO INSTALL

All accessories of the Thermo-Drip Automatic Humidifier are included in one kit. This compact package is economical to buy—easy to use and sell—easy to install. Adapts to every type warm air furnace. Pans rest directly on combustion dome for most efficient operation. Can be suspended in plenum chamber if necessary.

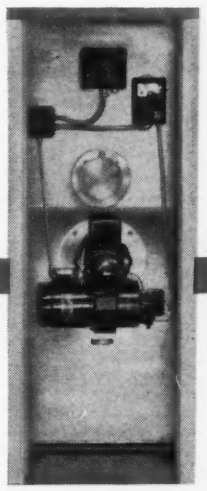
COMPARE THESE SUPERIOR PERFORMANCE FEATURES

- New, improved air-tight valve orifice has positive seating action.
- Fingertip adjustment with lock nut . . . that assures hairline regulation.
- No electrolytic action.
- No clogging.
- Easy to clean and service.
- Less parts—simplified design.
- No stagnant pool of water left in pan.
- Immediate vaporization.
- Easy, flexible installation.

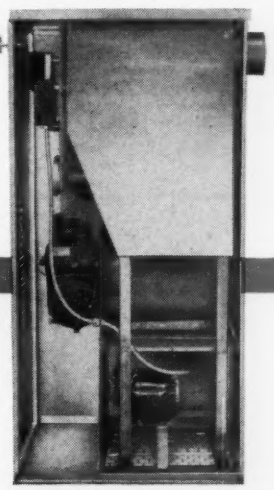
DEPT. FO-30

AUTOMATIC HUMIDIFIER CO.
CEDAR FALLS, IOWA

Kaustine
Factory Wired Controls Floor Sheet Cold Air Return
mean
Higher Dealer Profits



FACTORY WIRED CONTROLS — Protectorelay and Blower Control factory-wired on Front Sheet for easy installation.



FLOOR SHEET COLD AIR RETURN —Cold air passes through filter at bottom. For ranch style homes with trench type return air ducts.

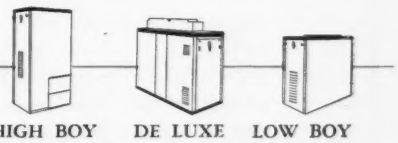
Dealers sell KAUSTINE Winter Air Conditioners easier, and make more money per sale. KAUSTINE Factory-Wired Controls and Floor Sheet Cold Air Return are two important sales and profit reasons.

KAUSTINE FACTORY-WIRED CONTROLS—Instead of isolating Protectorelay in the flue and Blower Control on top of the furnace, KAUSTINE unites these controls on the Front Sheet for greater convenience and protection. This KAUSTINE feature has exceptional home owner appeal, and lower installation costs mean greater dealer profits.

KAUSTINE FLOOR SHEET COLD AIR RETURN—Answering needs of today's Ranch Style homes for a furnace with air filter in the floor, KAUSTINE has designed the High Boy with a Floor Sheet Cold Air Return. It connects easily, without time-consuming cutting, to trench style return air ducts, to provide a vibrationless foundation for the furnace. All KAUSTINE Winter Air Conditioners are constructed with Floor Sheets in heating and front burner compartments. They neutralize fire hazard from oil soaked woodwork, and prevent dust from exposed concrete floors being circulated through the heating system, into rooms of the house.

For competitive advantage, get the facts on a KAUSTINE Dealership today!

Kaustine COMPANY, INC. PERRY, N.Y.



HIGH BOY DE LUXE LOW BOY

MODULATED WARM AIR FURNACES
SEPTIC TANKS PRESSURE VESSELS
SEPTIC SEWAGE DISPOSAL UNITS
OIL & GASOLINE STORAGE TANKS
HYDRO-PNEUMATIC & WATER STORAGE TANKS
TRUCK TANKS
CUSTOM BUILT FABRICATED EQUIPMENT

KAUSTINE CO., INC.
DEPT. 30-F PERRY, N. Y.
Please send complete information and prices covering the KAUSTINE line of Winter Air Conditioners.

NAME .....
ADDRESS .....
CITY ..... STATE .....
BUSINESS .....

When To Drain Boilers

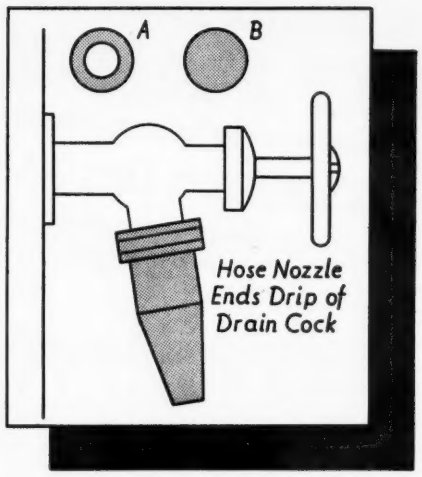
If as an oilheating expert you receive the usual number of questions, from heat-minded home owners, about how often to drain and re-fill heating boilers, you'd better work out a common-sense, stock answer that matches the type water in your locality and the kinds of heating equipment usually used.

An expert in a New York suburb where the water is not poor for boilers usually gives this kind of answer. Anytime the water runs clear and seems clean enough to take a bath in after you draw four or five pailfuls from a heating boiler, don't drain and re-fill the system. Change water that runs thick with rust and sediment. Usually it is all right to drain a heating system not oftener than once every two to four years.

* * *

Drain Cock Headaches

This could happen to you if you service burners. To find out if a fuel-wasting boiler was full of sediment and tomato soup instead of clear water, this man drew off a pail of water by opening a boiler drain cock. Then no matter how hard he closed off the drain cock handle even risking breaking it, out ran a trickle of boiler water. To replace the washer in the drain cock and end the trickle, says the service man, he would have had to spend hours draining all the water from the heating system. He was in a great hurry, but he could not leave the job with the drain cock leaking out a stream of boiler water.



A search about the house and garage turned up a garden hose nozzle. Screwing it on the trickling drain cock, the service man hoped it was the kind that could be closed tight. It wasn't. Removing the regular washer from the nozzle, shown as "A," he substituted a leather disc like "B." Having no hole, this permitted no water to escape.

Use the same way out of the trouble if you encounter it after blowing out the coil of an indirect water heater. After you clean such a coil, often a drain cock drips.

After using this wrinkle, be sure to tell the equipment owner what went on. Tell him some work is needed to drain water and replace the drain cock washer, but that this can be done at his convenience because you worked out a way to keep things from leaking meanwhile.

* * *

More On Steam Heating

An assiduous reader of FO&OH, busy as he is retailing fueloil, takes time out to draw attention to related items on p. 93 of the August, 1949 issue and p. 80 of the October, 1949 issue.

The first item, he points out, says

LYNN
POWER OIL BURNER

Lynn's Exclusive "Spiral-Ex" head

Model I F

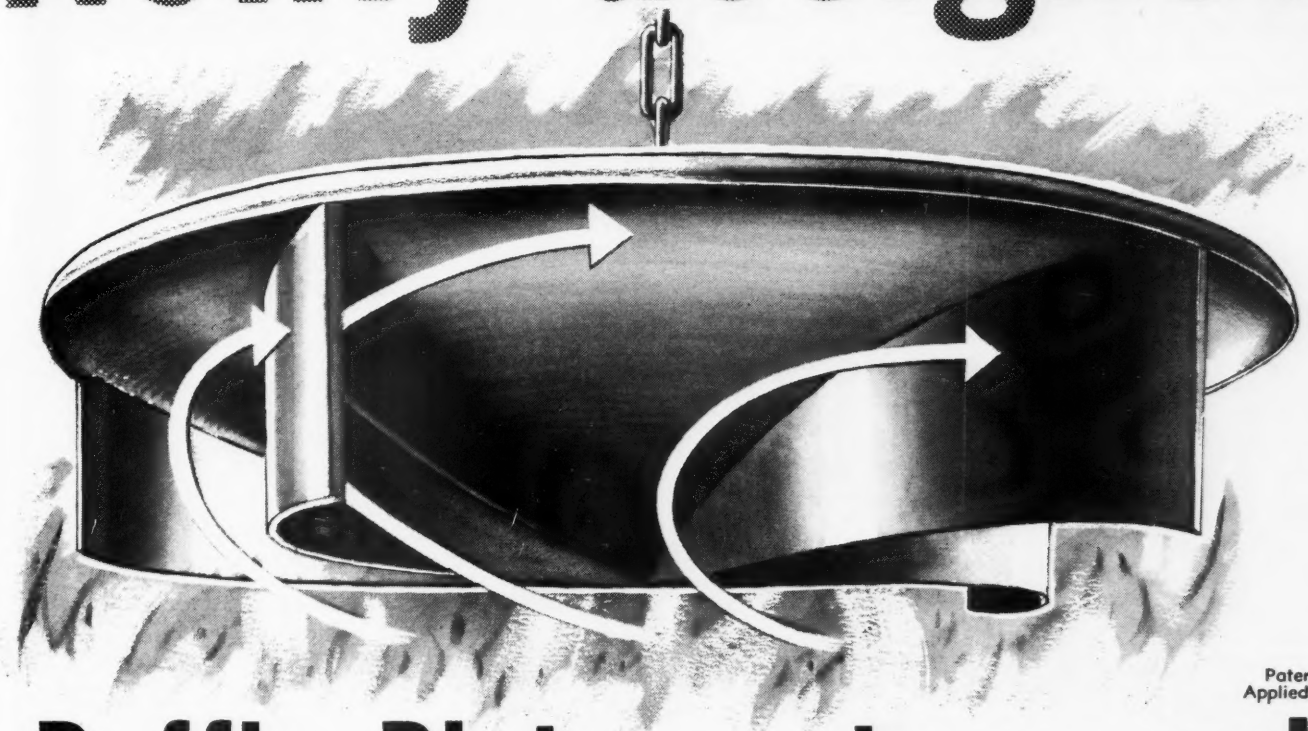
LYNN'S SPIRAL-EX HEAD is a sensation in COMBUSTION EFFICIENCY

With Lynn you are ready for 100% catalytic fuels now. The Spiral-Ex head will burn efficiently catalytic or present oils. It's a completely new and sensational development in burner head for clean combustion and operating economy. Five Lynn models give you a range from .65 to 15 G.P.H. Easy to install. Easy to service. Profit with Lynn.

Write for information about desirable open territory for distributors and dealers.

LYNN PRODUCTS COMPANY
Box 531 Lynn, Massachusetts
Manufacturers of Oil Burners Since 1922

Newly designed

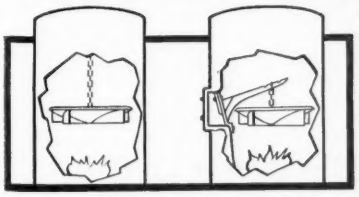


Patent Applied For

Baffle Plate captures and controls escaping heat and gases through Swirling Action!

Every Fire needs FIRE-SWIRL!

- **FITS ANY FURNACE!**
- **EASY TO INSTALL!**
- **HIGH PROFIT MAKER!**



HANGING INSTALLATION! Hung from chain across inside top of furnace chamber to clamp at top of Baffle Plate which also holds secure the two patented ½ sections of plate.

SUSPENDED INSTALLATION! Baffle Plate is suspended by chain from adjustable arm easily secured to furnace door opening in a few minutes.

Fire-Swirl has been proven to save more heat in actual operation than any other Baffle Plate on the market. Fire-Swirl is designed to produce swirling action in the furnace, controlling and maintaining the extreme heat generated in the flame tongue tips. Unlike a Chinaman's hat or a slab from which the heat bounces off and up into the chimney; Fire-Swirl's exclusive swirling action captures and retains the escaping heat by creating centrifugal action within the furnace.

Fire-Swirl action improves combustion by retaining higher combustion chamber temperatures, eliminating smoky fires by burning heavy ends of fuel oil, retarding flow of heated gases, and permitting greater heat absorption through boiler walls. Every fire needs Fire-Swirl.

Fire-Swirl fits any furnace and it is easy to install, coming in two halves with secure connecting feature. Made from malleable cast iron, sturdily constructed for long service; intense heat will not cause it to become brittle, flake, corrode, or warp.

FIRE-SWIRL

DEALERS!
Exclusive Fire Swirl franchises available in your area. Write today for complete information.

ZEH COMPANY INC.
PASSAIC, N.J.

that if steam pressure of two pounds drives the water from a U-tube water seal that connects the "drip line" of a radiator to a steam main, then the drip line can be connected instead to a wet return line. This refers to radiators of a one-pipe steam plant, hooked up with copper tube lines concealed in the walls of already-built homes.

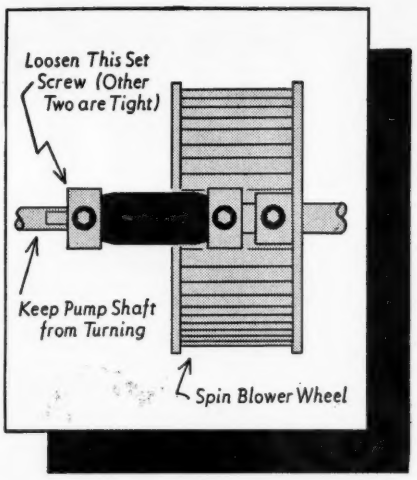
The second item, the fueloil retailer goes on, gives a better answer to the problem in the first item. It suggests that where water is blown out of a U-seal in a steam plant, the trouble can be ended simply by switching to a low-pressure control for the steam boiler. Have this stop the burner at perhaps a quarter of a pound steam pressure.

* * *

Avoiding End Thrust

When you work on a one-piece flexible coupling used to drive the pump of a pressure burner, check to make certain it does not fit the motor and pump shafts so tightly that it must be driven on.

Don't wind up installing a fuel unit by pushing or pounding it to drive its shaft into a tight-fitting flexible coupling. In order that the fuel unit and motor will spin freely and will be free of exerting excessive end thrust on each other, the rubber of the flexible coupling must not be compressed when the set screws of the coupling are tightened.



Play safe even after you make certain the ends of the flexible coupling slide freely on the pump and motor shafts. With the coupling properly in place, tighten the screws or bolts that fasten the fuel unit in position. Lock the set screw at the motor shaft end of the coupling. Then use a tool to keep the pump shaft from turning, and spin the motor shaft and coupling by reaching into the blower housing and spinning the blower wheel. Of course, the set screw at the fuel unit end of the coupling must be turned out far enough to permit the coupling to turn without turning the pump shaft. After you spin the coupling on the pump shaft, it will not exert end thrust. You then can tighten its pump end.

Avoiding excessive end thrust makes certain of minimum load on the motor, thus results in free-spinning and quiet motor operation.

Excessive end thrust should be avoided also because it can cause rapid wear of certain motor and fuel unit parts.

* * *

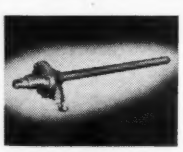
Too Much Make-Up Water

After converting to oil the one-pipe steam plant used to heat a large home, this burner dealer received one complaint after the other that the burner was stopping on its low-water control. The owner had to feed water to the

NO OTHER
Oil-Fired Equipment
Can Match Electrol
Complete Line: Oil Burners • Air Conditioners
Water Heaters • Boilers

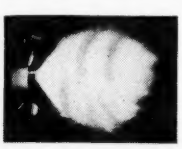
NO ONE HAS THESE EXCLUSIVE SALES FEATURES! ENTIRELY DIFFERENT BURNER!

Cut-off Valve



No other burner has this quick shut-off valve at nozzle. No oil drooling. No fouled nozzles. No after drip. No costly magnetic valves needed. Less service.

Ball Flame



No other burner has this suspended intense flame. Rotating fire never touches wall of chamber. Burns 100% "cat-cracked" oil without adjustment. Cleaner Boilers. Less service.

Master Control

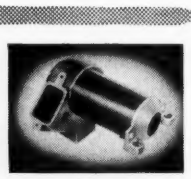
No other burner has a control operating on clean air instead of corrosive flue gases. Burner mounted, wired and tested at factory. No relays. No transformers. Less service.

Thermo-Loop

No other burner has this pure nickel heat exchanger. Operates safety control on pure air. Located right in combustion chamber. Constant performance regardless of flue gas temperature. Less service.

ELECTROL
BURNER MANUFACTURING CO., INC.
Rutherford New Jersey
BALL FLAME

Spiralon

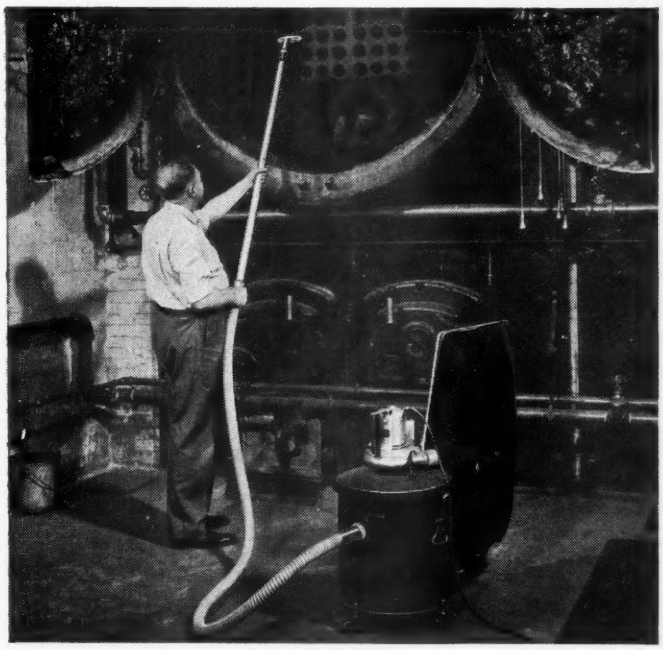


No other burner uses a large expensive casting to deliver air to combustion head. Because of this, no other burner has Electrol's intense flame. Highest alloy flame director. Prevents burnt air tubes. Less service.

VISIT US AT PHILADELPHIA —BOOTH 234

DEALERS! You'll find Electrol Easier to Sell! . . . Exclusive Sales Agencies Available! Write Today For Details!

Let this furnace cleaner bring you PROFITABLE CLEANING BUSINESS



More frequent cleaning of furnaces and boilers pays in fuel saved, experience shows.

You can keep your service people profitably engaged if you recommend more frequent cleaning to your customers.

Modern General Electric furnace-cleaning equipment makes the work easy. With this unit, the soot that cuts down heating efficiency can be quickly and easily removed.

Furnace-cleaning equipment was designed by General Electric engineers to make your furnace-cleaning service more profitable. Learn all about this powerful, speedy cleaner and the accessories available for use with it.

FREE! **Get details of General Electric furnace-cleaning equipment by writing for this catalogue. Learn how your cleaning service can be made a better business for you.**

Write for your copy today

Furnace Cleaner

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, Dept. 22-1619
1285 Boston Avenue, Bridgeport 2, Connecticut

Please send new catalogue and other information on General Electric furnace-cleaning equipment.

NAME.....

ADDRESS.....

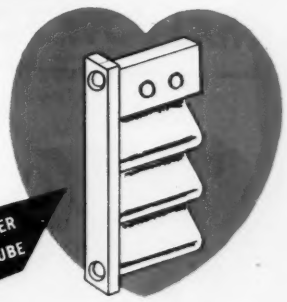
FIRM.....

CITY..... STATE.....

Koven WATERFILM BOILERS

FOR FASTEST HEAT AT LOWEST COST!

- Patented Construction
- Quick-Steaming
- Retards Accumulation of Soot
- Economical
- Rugged Construction
- Easily Replaced



THE HEART OF THE WATERFILM BOILER IS THE ZIG-ZAG SHAPED WATER TUBE

THE FASTEST STEAMING BOILER MADE!

WATERFILM is easy to sell — because its exclusive patented construction provides every advantage in demand. Quick heat. Lower fuel bills. Comfortable, even temperature in every room. Plenty of domestic hot water at all times. *Plus* streamlined enamel jacketing. WATERFILM is the fastest-steaming boiler because its unique zig-zag water tube enables just a ¾" film of water to boil and start producing steam — thus heat begins rising long before the main body of water in the tank is even warm. In models and sizes for small homes, apartment houses and industrial plants. For the larger installations, the Sectional Boiler can be taken through a 2-ft. door. 500-17, 850 E.D.R. NATIONALLY ADVERTISED. Write for free literature and newspaper mats.

EVEN ROOM TEMPERATURE THROUGHOUT THE HOUSE!

WATERFILM BOILERS, Inc.

A Division of L. O. Koven & Bro., Inc.
154 Ogden Ave., Jersey City 7, N. J.
Plants: Jersey City, N. J. Dover, N. J.

FOR AUTOMATIC FIRING WITH OIL, STOKER OR GAS

NOW a complete line of modern MARLOW PUMPS for the petroleum marketer!

A MARLOW FOR EVERY PUMPING JOB

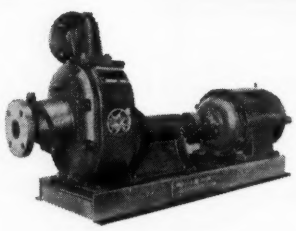
Marlow Type SC

MARLOW CENTRIFUGAL PUMPS

For high capacity and high efficiency in pumping light liquids on flooded suction installations. Close and long-coupled models, sizes 1 to 4 inches, capacities 10 to 1000 GPM. Features include an easily renewable sealing ring at impeller inlet, deep-groove oversize ball bearings, and a John Crane dripless shaft seal. Motors from ½ to 30 HP. Explosion proof or fully enclosed.

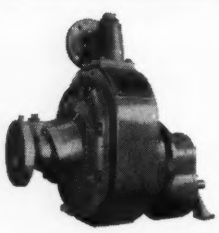
MARLOW SELF-PRIMING CENTRIFUGAL PUMPS

The only light-liquids pump for long, trouble-free service on suction lifts. Marlow Self-Primers offer high capacity and high efficiency with *automatic priming*. Suitable for underground storage or for transfer or loading operations. Close and long-coupled models, sizes 1½ to 10 inches, capacities 15 to 3500 GPM. Self-priming, self-purging design assures automatic priming and freedom from vapor lock. Free clearances at impeller help eliminate wear, prolong life and original high efficiency. Motors ⅓ to 60 HP, explosion proof or fully enclosed.



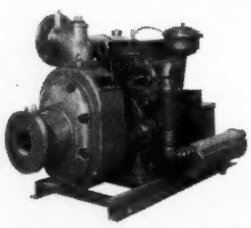
Marlow Type EL

Models also available for belt and engine drive and for high pressure service.



GEAR INCREASER PUMPS

NOW — a *quiet*, dependable centrifugal tank truck pump that couples direct to power take-off. Installs like a rotary but has a centrifugal's smooth efficiency, high capacity and *long life*. Sizes 2 and 3 inch. Capacities 20 to 200 GPM.



ENGINE DRIVEN PUMPS

Marlow Self-Priming Centrifugals for refueling or transfer, where mobility or stand-by operation is required. Sizes 1½ to 8 inches. Capacities 15 to 2000 GPM. 2- and 3-inch sizes available with electric starter and spark arresting muffler for tank truck service.

Wherever pump users gather you will hear the name MARLOW used as a standard of pump efficiency, trouble-freedom and long life. It will pay you, too, to standardize on the standard.

Write the Marlow factory for complete information and the name of the Marlow dealer nearest you.

MARLOW PUMPS

596 Greenwood Avenue, Ridgewood, New Jersey

MANUFACTURERS OF QUALITY PUMPS SINCE 1924

boiler once a week, and hadn't counted this as part of enjoying oilheat. Setting the boiler pressure control as low as possible did not help. Selling all new vent valves to the owner helped but little. Pointing out that the system must have used lots of make-up water with coal only made the owner angry.

Realizing he had to end the service calls and satisfy the owner even if this would take most of a Saturday afternoon, when the owner was home, the dealer used ten pounds steam pressure to show up the leaks in the system that permitted steam to escape.

With the second floor radiators all turned off and the pressure control removed from the boiler, ten pounds steam pressure easily was put on the first-floor radiators. Then the first-floor radiators were turned off and the second-floor radiators were turned on, and a search was made for steam leaks in the upstairs pipes, radiators, and radiator shut-off valves.

Under ten pounds pressure, steam and boiler water leaked out from a dozen places sufficiently to show the owner the system needed tightening. The worst leaks were past the packing of radiator shut-off valves, around the boiler's water glass, through the boiler pop valve that did not close tightly, and in a rusted-through return line that fortunately was not buried under the basement floor.

* * *

Bathroom Radiators

This bit of advice from a heating engineer who's been laying out and performance-checking domestic systems for 30 years contains horse sense for newcomers to layout work.

While it is important to locate radiators properly, along coldest walls and under large windows, in the large bedrooms and living rooms and dining rooms, you don't need to worry about the location of bathroom radiators as long as you make them large enough. Make the bathroom radiator 50% or even 100% larger than it needs to be to match the bathroom's heat losses, and locate it on an inside wall.

Another thing: A large bathroom radiator helps heat an upstairs hall and reduces drafts on the stairs, because usually the bathroom door is left open.

THANK YOU

fueloil & oil heat

for backing up our advertising claims that a filter will eliminate strainer problems, reduce trouble calls, save time, increase profits, and keep customers satisfied.

CUNO

fueloil & oil heat

THE DISTINCTIVE MAGAZINE FOR PERSONS, ORGANIZATIONS, BUYING AND MANUFACTURING FUEL

Cuno Micro-Klean Ad(vice) to Fuel Oil Men

ALL YOU NEED NOW to Filter Any Domestic Oil Burner IS A CUNO FILTER — C

One model Cuno MICRO-KLEAN Oil Burner Filter handles any installation using domestic fuel, from the smallest cottage to the largest public building. Straight line pipe connections.

ALL YOU NEED NOW to Service an Oil Burner Filter IS A CUNO CARTRIDGE — B

One standard MICRO-KLEAN cartridge fits any MICRO-KLEAN filter—only one size to lug to the job. Cuts down inventory, too.

ALL YOU NEED NOW for 60-Second Service IS A CUNO FILTER — D

Removing a single nut on the MICRO-KLEAN filter loosens housing cover for 60-second cartridge replacement.

ALL YOU NEED NOW to Insure User Satisfaction IS A CUNO FILTER — A

MICRO-KLEAN cartridges give your customers better service because they will not channel, they last twice as long and hold twice as much dirt.

To insure customer satisfaction and save installation time . . . ask your jobber about Cuno MICRO-KLEAN Oil Burner Filter Model 1C1.

FOR FREE BULLETIN, ATTACH COUPON TO YOUR LETTERHEAD

CUNO

OIL BURNER FILTERS

Easier to Stock . . .
Easier to Service

Cuno Engineering Corp.
8522 South Vine St.,
Meriden, Conn.

Please send information on Cuno MICRO-KLEAN Oil Burner Filters and replacement cartridges.

Name.....

Title.....

Company.....

Address

Make us prove that filter protection for oil burner pumps and nozzles need not be a headache. Fill out this coupon and mail it today.

Fuel Oil & Oil Heat Explains the Problem

Curing Feed Line Troubles

MORE THAN TWO YEARS AGO, a service man we were quizzing broke down and confessed that seldom if ever did he clean the oil strainers in some fuel units of the burners he services.

Once he had this off his mind, he declared that certainly he was having much more trouble than if he cleaned these strainers regularly. Right then he had two jobs with pumps whining loudly because, probably, the fuel unit oil strainers were practically tight-plugged, he said. Loss of prime on outside jobs often was caused by plugged strainers. Chronic nozzle plugging could be blamed on the same thing.

Whenever he got around to taking apart some fuel unit strainers, or was forced to it because the burner simply would not run otherwise, the strainer surely was tight-plugged.

Why was he putting a blot on his own reputation, besides making oil heating a curse to scores of homes, by failing to clean these strainers regularly?

"Every time I take apart the strainer of certain fuel units," he complained, "I get in an awful mess. Mostly, because I haven't with me the dozen kinds of parts I need for a wide variety of fuel units. Then, of course, some old burners have separate suction or feed line strainers, not built into standard fuel units, and I haven't the parts for these either. The strainer I've taken apart needs a new screen or new gaskets, it turns out, and I haven't with me what's needed. Often the strainer cleaning job is awful messy because the design artist behind the strainer didn't facilitate regular, easy strainer cleaning; the job might take two hours. Then again, after taking apart and cleaning a strainer, often in a week I get a call-back because it's dripping. There are just too many headaches and heartaches in getting out and cleaning all the strainers on my customers' burners that need cleaning!"

The advice this service man received worked out beautifully for him, just as it had for a dozen other men who faced the same problem.

Here it is. First, find a suction line strainer or filter you really can love because it is the tops in design, is tremendously effective for ending nozzle plugging trouble, and above all is a gland of a fuel unit pump, which if expensive to repair once it develops a leak, often is damaged by grit that can be stopped by a highly effective strainer or filter.

Fourth, make it easy and simple for you to install quickly and neatly the strainer or filter units you sell. Have with you the small fittings you will use. Develop your own standard layout for adding the unit, using either small size copper tubing or ⅛" pipe for inside tank jobs and ¼" pipe fittings for outside tank jobs. These sizes are minimum, of course.

Fifth, when you install your pet filter or strainer, remove from the old burners or old fuel units the strainers it's been a headache to clean. The big idea is that, once you've modernized the oil-handling on all your jobs according to your own ideas, the only oil line filter or strainer you'll have to clean will be your pet. You've selected that one because for one thing it's a pleasure for you to clean it. Besides, you are never going to be caught without spare parts for that one.

This system for turning a headache into a pleasure, and a profitable pleasure at that, has been working for a number of years for smart service men who've got what it takes to recognize a good thing and see it through. The best part of the thing is that it winds up with reduced service expenses for the customers, as well as more efficient and more dependable burner operation.

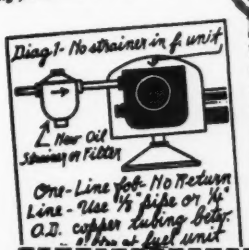
Fuelioil suppliers searching for opportunities to improve their customer's enjoyment of oil heating can use this same wrinkle to excellent advantage. Such companies can't do much more for their customers than (a) reduce yearly service expenses, and (b) eliminate plugged-strainer troubles.

fueloil & oil heat Short Short Article on Burner Service

pleasure to tend to properly once a year. Locate a filter or strainer you can get a kick out of cleaning in a neat way in a side of 15 minutes.

Second, buy three or four dozen filters or strainers of this type. Obtain plenty of spare parts. From then on, keep plenty of complete units and spare parts in your car. You're never going to be caught without them.

Third, one by one, sell your customers on the idea of letting you install this particular make and model of strainer or filter, for your aim is to wind 'up with exactly this unit on every job you service. Your big sales arguments include the [illegible] this modern, neat, highly effective filter or strainer will be tended to by you each fall at a minimum of effort. You won't have to fuss an hour cleaning it. The quick, easy regular attention you will then give the filter or strainer will keep the burner in better condition, less likely to break down, more efficient in its use of fuel, and more like new than if grit, sludge, and gum were feeding into the oil pump, nozzle, and pressure regulator and shut-off [illegible] Remember that even the shaft


Diag.1- No strainer in f. unit
Near Oil Strainer or Filter
One-Line Job- No Return Line - Use ½" pipe or ¼" O.D. copper tubing between oil line & fuel unit

CUNO ENGINEERING CORPORATION South Vine St., Meriden, Conn.

I want to know how Micro-Klean can save time, money and work on my oil burner installations and service.

NAME.....

COMPANY.....

STREET ADDRESS.....

CITY.....STATE.....

WHO IS YOUR JOBBER?.....

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Groups' activities to reach the editor by the 18th.

Washington Dealers Asked About Losses or Conversions to Gas

A COMMITTEE, composed of J. W. Warner, chairman; A. P. Woodson, C. A. Blinston and J. G. Chappell, have been named by the Oil-Heat Institute of Greater Washington, D. C., to study the local oilburner market. Object of the survey is to develop recommendations which will help to increase oilburner sales as well as a plan to combat the inroads of gas competition.

As the first step each member has been sent a questionnaire asking, "1. If you lost prospects for new or conversion burners to gas in 1949, state why you believe you lost these sales?"; "2. If some of your oilburning customers converted to gas in 1949, what did you find were the reasons?"; "3. What are your suggestions to the committee that this Institute might use in combatting the competition from gas in 1950, which would assist in developing a program?"

The committee is studying replies and plans to report in the near future to a special meeting of the Institute.

The February membership meeting, held on February 21 at the Burlington Hotel, had as a speaker, W. W. Townsend, manager, Marketing Dept., Fuel Oil and Oil Burner Sales, Esso Standard Oil Co. Drawing from his background and experience in Esso's marketing areas, he addressed the luncheon meeting on natural gas competition, referring to what was known about its operation in other sections and suggesting constructive means to combat it.

Natural Gas Is Topic of Atwill's Talk at Milwaukee

SPEAKING at the 7th annual State Wide Industry Rally and dinner, sponsored by the Wisconsin Oil-Heat Association, Milwaukee 2, Wis., A. T. Atwill discussed the "Battle of Automatic Fuels." Mr. Atwill, president of Quaker Mfg. Co., Chicago, and president, Oil-Heat Institute of America, Inc., New York, reduced the competitive fuels to two in number, gas and oil, and devoted his talk to a comparison of each. Specifically referring to the introduction of natural gas into Milwaukee, he referred to the fuel as "no mean antagonist" and reminded his listeners of the concentrated and intensive campaign with which the gas companies merchandise the product.

In common with other territories, too, Mr. Atwill pointed out that Milwaukee, previously served with manufactured gas had concentrated on efficient installations to offset excessive gas costs. Natural gas inherits the acceptance built-up by such excellent installations. However, he continued if Milwaukee follows the pattern of other cities, the quality of the installations will deteriorate as a large volume of systems are put in and it becomes physically impossible to inspect each job and insist that it be installed by a qualified organization.

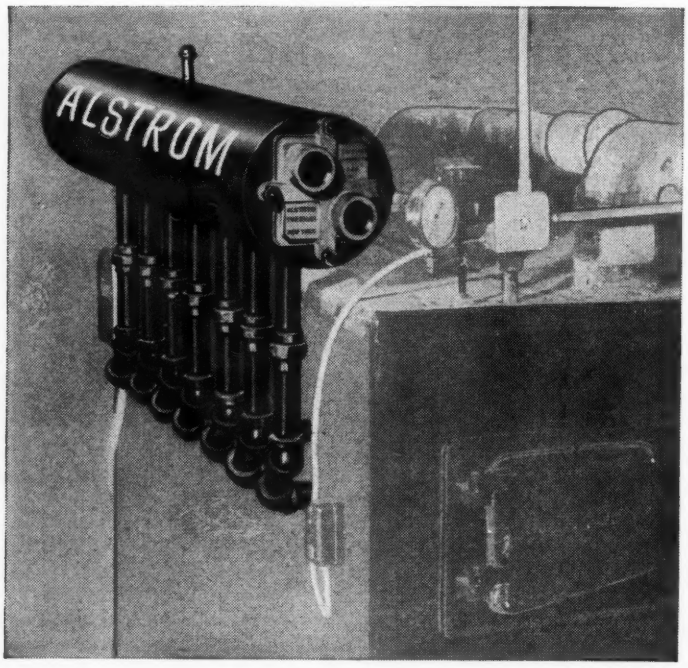
"Natural gas will be priced at 9.1¢ per therm, which in Btu value will be

Alstrom

VACUUMATIC

TANKLESS WATER HEATERS

for ALL Sectional Cast Iron STEAM BOILERS



- Submerged Coils for All Steel Boilers
- The Counterflow for Small Homes

CATALOG ON REQUEST

The ALSTROM Corporation

790 E. 176th Street Bronx 60, New York

Sales Tools

York Heat's 1950 Merchandising Program for York-Heat Dealers

YORK-HEAT distributors and dealers throughout the country are finding out what is inside this merchandising plan book during March at a series of meetings in major distribution centers. York-Heat for 1950 is offering dealers the LONGEST LINE—STRONGEST FRANCHISE plus a workable merchandising program that will mean GREATER PROFITS to the sales-minded dealer. You can participate in this money-making program by getting on the York-Heat bandwagon today. Call your York-Heat distributor or write York-Shipley, Inc., York 5, Penna., and find out when the York-Heat meeting will be held in your area.

YORK-HEAT

PRODUCT OF YORK-SHIPLEY, INC., YORK, PENNA.
Manufacturers of York-Power Industrial Burners and Steam-Pak Generators

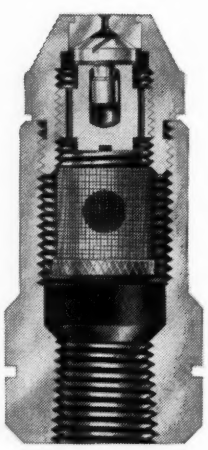
equivalent to fueloil at 13¢ per gallon," Mr. Atwill continued, referring to the Milwaukee area, and since oil is presently selling at about that price the heating cost will be approximately the same to users with systems of equal efficiency. In addition, prices of natural gas at the wells now are so low that there is agitation even within the gas industry itself to raise them. The cost at the wells today is three times its price in 1945 and one authority predicts an advance to 15 or 20 cents within the next few years, and a member of the Texas Railway Commission says it should be 44 cents.

After comparing the two fuels on the basis of availability, safety and preferences expressed in surveys, Mr. Atwill concluded, "It is not too soon for each one of you to go out after this market, harder now than ever before. I want to tell you one thing. Even though there is a great host of people who can be sold an oilburner easily, they will not come to you to buy it. Put it down—that to get those orders you are going to have to go out and bring them in."

". . . The days of bunk and baloney in selling are gone. You must know your product. You must render real service. You must sell your customer on what your product will do for him. You will have to get a price for your product in order to make good installations and give good service. I'm sure that gas can beat yours ears off in price of the equipment if you have only a price appeal, . . . but if you sell your product you can come out with the order."

BETTER TESTING
Assures
BETTER NOZZLES

All Delavan Oil Burner Nozzles are spray tested under controlled conditions in which oil viscosity is held to within plus or minus ½ SSU; temperature is controlled to within one degree; and pressure to within ¼ PSI. This is your guarantee of absolute accuracy in rate of flow, spray quality and spray angle.



For the highest quality nozzles—at lower than pre-war prices — always specify Delavan.

Write for Bulletin 147C

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MEMBER OHI OIL HEAT INSTITUTE OF AMERICA

New England OHI Releases Program for Annual Meeting

THE COMPLETE PROGRAM for the one-day annual meeting of the Oil Heat Institute of New England, Boston 15, Mass., has been arranged, according to Fred N. Beckwith, executive secretary. The session will convene on March 14 at the Statler Hotel and will open with the annual meeting at 11 A.M., at which time one-third of the members of the board of directors will be elected. Immediately thereafter, the entire board will meet to elect a president, first and second vice presidents, secretary, treasurer and a representative of the associate members to sit on the board.

The annual industry luncheon will be called to order at 12:30 P.M., for which two speakers have been engaged. Lon Casler, of Casler, Hempstead & Hanford advertising agency and public relations counsel, Oil-Heat Institute of America, Inc., is to discuss the problem of natural gas vs oil, embellished by discussions of what is happening in other parts of the country faced with similar problems. The second speaker, Honorable Harold Caldwell Kessinger, is noted for his timely, but humorous comments.

The annual meeting of the new board of directors, scheduled for 4:00 P.M., will conclude the day's activities.

PHIB Names Three Directors, Appoints Finance Committee

TO BRING THE BOARD OF DIRECTORS to its full complement of twenty, George O. Toepfer, president, Plumbing & Heating Industries Bureau, Chicago 1, Ill., has added three directors to the seventeen elected at last October's annual meeting. John M. Dumser, Chase Brass & Copper Co., has been reappointed to represent the Copper & Brass Association; G. C. Bulkley, American Sanitary

They're all your PROSPECTS

if you're a Waterbury Dealer!

A COMPLETE LINE OF NATIONALLY ACCEPTED HEATING EQUIPMENT FOR YOUR ENTIRE MARKET

Two important advantages belong to every Waterbury dealer. He has a complete line to offer—and he finds complete buyer confidence in the equipment he sells . . . brought about by Waterbury's high standards of excellence and consistent national advertising. Buyers of warm air heating know that Waterbury has the right unit for their home—the kind it should have. That means more prospects, more actual sales . . . and a secure, growing future for every Waterbury dealer.

Waterbury FURNACES AND AIR CONDITIONERS

THE WATERMAN-WATERBURY CO.
1171 Jackson St. N. E. Minneapolis 13, Minn.

fueloil & oil heat

Mfg. Co., represents the Tubular Plumbing Goods Institute and C. E. Lewis, Perfex Corp., represents the Oil-Heat Institute of America, Inc.

D. D. Couch, American Radiator & Standard Sanitary Corp., was reappointed chairman of the Finance Committee, with the following committee members: Charles A. Ferguson, Noland Co., Inc.; Arnold H. Goelz, Kroeschell Eng. Co.; Herbert V. Kohler, Kohler Co.; P. R. Mork, Crane Co. and George O. Toepfer, National Association of Master Plumbers.

Massachusetts Dealers Told of Mobile Radio Uses

THE FEBRUARY 16 meeting of the Massachusetts Oil Heating Association, Inc., Watertown 72, Mass., was held at the Lafayette Hotel, preceded by the usual dinner. Speaker at the meeting was Crump Smith, president, American Communication Co., Newton, Mass., who told of "Mobile radio and its application to the oilheating industry."

His talk covered mobile radio as now available to the businessman and how mobile radio operates to save money and customers. Mr. Smith had demonstration models of mobile radio equipment with him for inspection and used them in explaining how its application fits into service and fueloil delivery operations.

Smart Named President Of Convector Manufacturers

AT THE ANNUAL MEETING of the Convector Manufacturers Association, Chicago 1, Ill., held on February 14 in Cleveland, J. Howard Smart, sales manager, Tuttle & Bailey, Inc., New Britain, Conn., was elected president.

Walter Schlicting, sales manager, Young Radiator Co., Racine, Wis., was named secretary.

Lewis Talks To Illinois Petroleum Marketers Group

C. E. LEWIS, president, Perfex Corp., Milwaukee, Wis., was a speaker at the annual convention of the Illinois Petroleum Marketers Association on February 16 in Peoria, Ill. He pointed out that the volume of oilburner sales in 1949, totaling better than 570,000, represented the second best year in the industry's history and predicted that 1950 totals should be as high as last year's if the industry goes out and fights for its share of the business.

In referring to gas competition, Mr. Lewis stated he knows of no midwest market where gas is cheaper than oil. In 1945, for example, he said gas averaged 3.8¢ a thousand feet at the well; in 1948, 6¢ and some contracts today have been let at 10¢, with some buyers bidding higher. With such prices at the source, Mr. Lewis declared that public utility commissions would be unable to hold down gas rates.

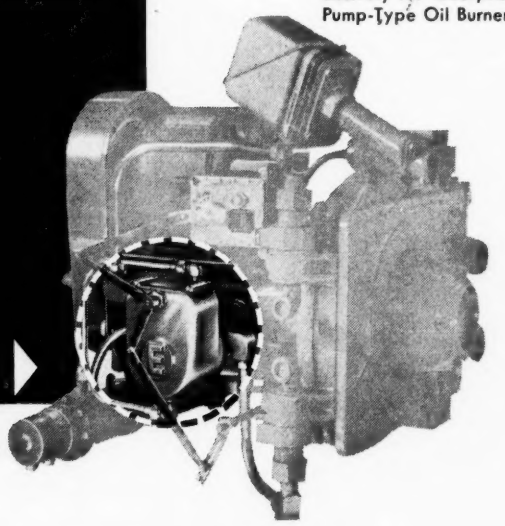
Officers Elected by Propeller Fan Makers

NEW OFFICERS elected at the annual meeting of the Propeller Fan Manufacturers' Association, Detroit 26, Mich., held at Daytona Beach, Fla., on February 10, are: President, B. G. Krause, manager, Air Controls, Inc., Cleveland; vice-president, W. H. Holt, manager, Fan Merchandising & Standard Apparatus Div., Buffalo Forge Co., Buffalo and secretary-treasurer, L. O. Monroe.

The Association has been active in

1 more reason why
ENTERPRISE ROTARY OIL BURNERS LEAD THE FIELD...
THE ENTERPRISE P·D* Metering Pump

Designed and built exclusively for Enterprise Pump-Type Oil Burners



ENDS VISCOSITY PROBLEMS! *Positive Displacement

- Compensates for all changes in viscosity!
- Provides a constant, accurate fuel supply!
- Eliminates problems arising from leaky suction lines!
- Requires no special adjustments!

"The most versatile, accurate and efficient metering device of its type!"

SEND FOR NEW BULLETIN

Bulletin No. 51 fully describes and illustrates the Enterprise Metering Pump and its many outstanding features. Write for it today.

ENTERPRISE Oil Burners
The Choice of Heating Experts

Dealers! Contact your nearest Enterprise distributor for full information, or write us for his name.

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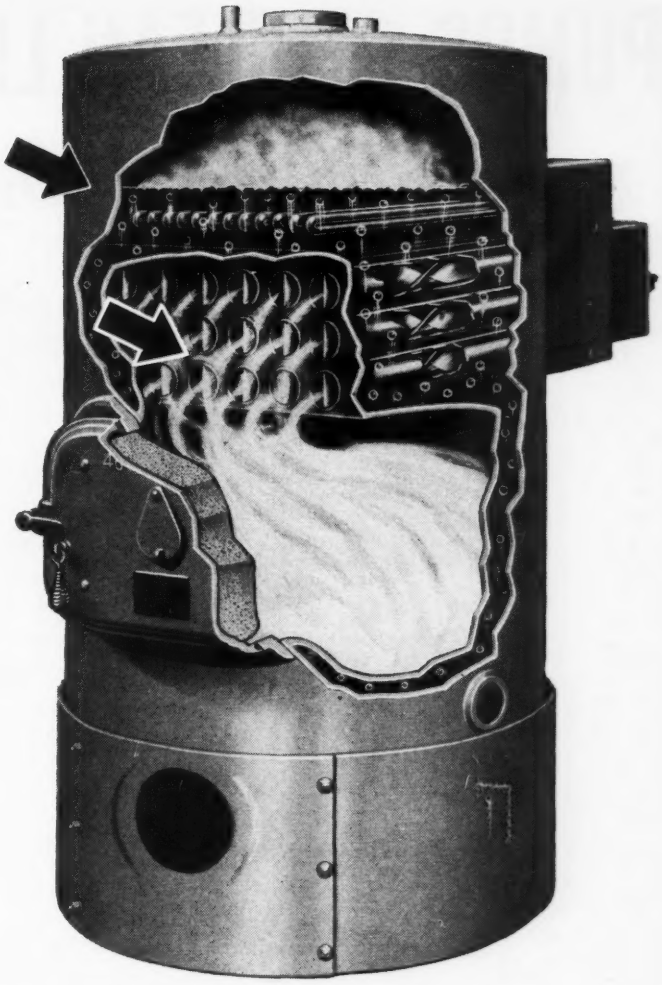
It's STEEL
STEEL
STEEL

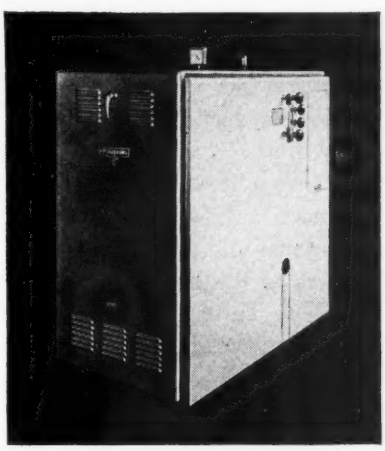


It's *steel* for strength, *steel* for long life and *steel* for the highest heating efficiency. Not just *any* steel—the steel in Fitzgibbons "400" Series boiler is "Flange quality" or better and of 1/4" to 5/16" thickness, in accordance with the A.S.M.E. Code requirements. Its construction is inspected and approved by "Hartford" to insure acceptance in every State. The heavy fire tubes are *rolled* into the heavy tube sheet—not welded. Like all superior products, The Fitzgibbons Boiler* is worth every dollar that it costs.

***SEE OUR EXHIBIT* of residential boilers at Booth 307-309, the National Oil Heat Exposition, Philadelphia, April 24-28.**

The FAMOUS FITZGIBBONS "400"

THE ARISTOCRAT OF STEEL BOILERS • BUILT BY BOILERMAKERS IN A BOILER SHOP



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HEATING · POWER · PROCESS
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MOST ECONOMICAL IN FUEL
1886
THE FITZGIBBONS BOILER
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about this Fitzgibbons "400" Series steel boiler with its famous Tanksaver* coil, its A.S.M.E. Code steel construction, its hydrostatic test, its guaranteed SBI rating, and the reputation of a boiler company in business since 1886, mail the coupon today for catalog.

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F.O. & O.H. 3-50

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Send me the "400" Series Catalog.

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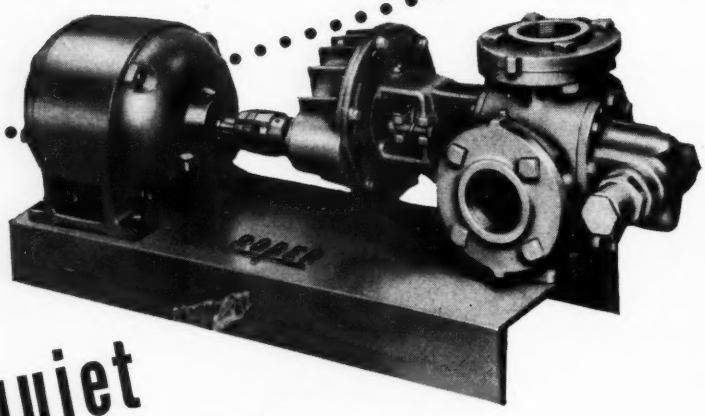
PUMPS for CLEAN LIQUIDS

thick or thin.....



quiet
efficient
dependable

The Roper, 3600 Series, Pump illustrated above is a motor-driven unit with totally enclosed anti-friction gear reduction, mounted on a steel bedplate. Furnished with or ready to receive a standard motor. Capacities from 40 to 100 g.p.m. Other models in double and multiple units also available.

Roper motor-driven pumps are highly efficient for pumping oils, greases, solvents, thinners, paints, syrups, etc., in industrial plants and process industries. They handle a wide range of thick or thin clean liquids efficiently, quietly, economically.

Roper dependability is assured by design simplicity and time-proved features such as self-lubrication, extra deep packing box, adjustable relief valve, anti-friction shaft and thrust bearing, axial hydraulic balance, etc.

Write for complete information

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763 Blackhawk Park Avenue
ROCKFORD, ILLINOIS

SEE OUR CATALOG IN SWEET'S

ROPER
Rotary Pumps

establishing a code for installation of attic ventilation fans and fan performance standards.

L. I. Dealers Join Other Groups In Campaign Promoting Oil Heat

IN AN ANNOUNCEMENT sent to local fueloil dealers, William Allyn, president, Fuel Oil & Oil Heating Dealers of Nassau, Inc., Freeport, N. Y., discussed the need for an active promotion campaign to sell oil heat. He revealed that the group is cooperating with the New York Oil Heating Association, Westchester Oil Trades Association and the Long Island Terminal Operators Association.

The Nassau association inserted in the January 28 edition of *Newsday*, local newspaper, another in a series of advertisements, signed by each of its twenty-one members. Offering a "friendly heating service," the copy stressed that each member is an individual doing business as ". . . neighbors interested in serving you well."

Guest speaker at the February 21 meeting of the group, held at Kennedy Memorial Park Hall, Hempstead, was Harry B. Hilts, secretary, Atlantic Coast Oil Conference.

Pacific Coast Meeting Includes Product Show

THE PACIFIC COAST joint meeting of West Coast Oil Heat Institute chapters was held March 2-4 at Seattle. The first two days were devoted to an exposition at Eagles Auditorium, during which exhibits of manufacturers of oilburners and accessory equipment displayed their products.

The combined meeting was held on Saturday, March 4, with a program beginning with a luncheon, followed by an afternoon meeting, a cocktail hour and a banquet and entertainment.

Speakers at the business session included C. E. Lewis, president, Perfex Corp., Milwaukee; Howard A. Sisson, Standard Oil Co. of California; Lon Casler, Casler, Hempstead & Hanford, Chicago advertising agency and public relations counsel, Oil-Heat Institute of America; Professor A. M. Cannon, College of Business Administration, University of Washington and W. O. Spiess, national secretary, Distribution Div., Oil-Heat Institute of America.

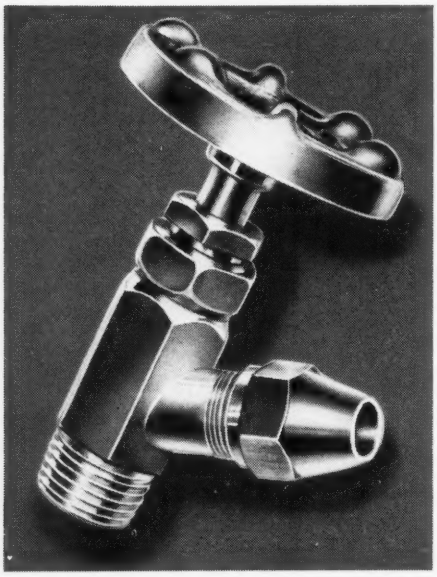
ALL TRUCKS GIVE TROUBLE AT SOME TIME OR OTHER. THEREFORE, AUTOCAR IS NOT CONTENT ONLY TO BUILD OUTSTANDING HEAVY-DUTY TRUCKS, BUT PLACES BEHIND THEM THE NATIONAL AUTOCAR SYSTEM OF FACTORY BRANCHES AND AFFILIATED DEALERS TO KEEP THEM ON THE ROAD WITH THE ABSOLUTE MINIMUM OF LOST TIME. THAT'S WHERE TRUCKS PAY—ON THE ROAD. *NOT* WHEN THEY ARE TIED UP IN SHOPS.

This traffic-wise Model U-7062-S Autocar, owned by Cities Service Oil Company, NewYork, loads up daily with 3,200 gallons of fuel oil.

Autocar Trucks · *They cost less, because they do more work*

The Autocar Company, Ardmore, Pa. • Established 1897 • Factory Branches and Distributors from Coast to Coast

NEW
OIL SHUT OFF VALVES by Guardian



No. 1900 Oil Filter Valve

No. 1300 Two Tank Control Valve Assembly

No. 1200 Individual Tank Control Valve

No. 1600 Underground Tank Valve

If you think all oil valves are alike, take a look at the new GUARDIAN line of oil control valves. These handsome valves are especially designed for oil line service . . . built with precision . . . accurately machined to perfect tolerances.

Check these GUARDIAN features and see the difference!

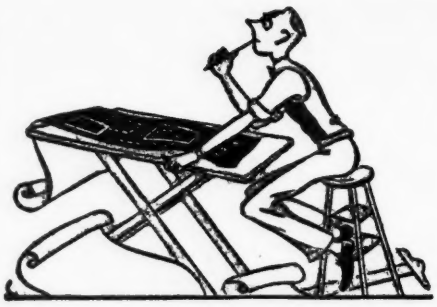
- Made from extruded brass bar stock.
- Outlet joined to body by a special silver soldering process which guarantees a perfect connection.
- Metal-to-metal seating insures perfect closing, eliminates usual deterioration . . . assures longer life.
- Precision tapered seat in body and radius on stem prevents parts rfom locking . . . gives smoother operation.
- Adjustable packing nut with special J-M graphite-asbestos packing especially designed for oil.

Complete specification data now available. Write today for Bulletin V-101.

Ask about Guardian Flexible Couplings— Over 4 million in use!

See the Complete GUARDIAN Line At Booth 645 National Oil Heat Exposition April 24-28, 1950 Philadelphia, Pa.

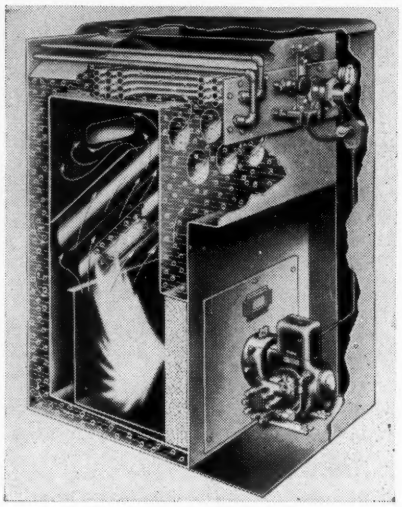
Guardian
PRODUCTS CORP.
VALVE DIVISION
DEPT. F-1, 1215 EAST SECOND STREET
Michigan City, Indiana



New Products

Pensteel Packaged Heat Unit Is Oilfired Water Tube Boiler

EIGHT SIZES of Pensteel packaged heat units are available from Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.



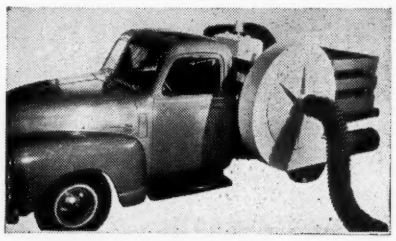
Steam capacities for the oilfired water tube boilers range from 200 to 1100 sq. ft. steam net, hot water from 320 to 1760 sq. ft. net. Oilfiring rates begin at .85 gph for the small size, up to 4 gph for the largest model. All sizes feature built-in copper tube coil water heaters and built-in expansion tanks.

Pensteel tubes meaure ¼" in thickness, the same as the steel plate used in the boiler construction. Combustion chamber, furnished with the boiler, is fabricated of stainless steel, with the waterways of the firebox completely surrounding the ignited fuel. The units have been designed expressly to occupy a minimum floor space.

Kleenmaster Vacuum Cleaner Is Mounted On Truck Chassis

KLEENMASTER vacuum cleaners, available from Molloy Sales Corp., Chicago 18, Ill., are mounted on a three-quarter or one-ton truck body and employ a 6 x 32 ft. heavy fabric dust filtering bag. It is described as capable of cleaning a heating plant in less than one hour, with powerful suction, and deposits all dust, dirt and soot into the large bag, which remains outside the house.

A complete unit includes Ford or Chevrolet trucks at list prices; power unit assembly, LeRoi engine with elec-



tric starter and hand throttle; filter bag and 100 ft. of flexible rubber hose and steel tubing. A twin disc clutch prevents overload of the engine during starting.

Available also is a Kleenmaster Junior, a trailer-mounted smaller unit, which operates on the same principle as the larger model.

American Combustion Chamber For Domestic Oilburner Use

ANNOUNCEMENT has been made by American Clay Forming Co., Tiffin, Ohio, of a refractory combustion chamber for use with domestic oilburners. This is the first of the American line to be offered to oilburner dealers and distributors rather than exclusively to manufacturers.

The chambers are built to withstand 2500° F. operating temperatures, are light in weight with good insulating qualities. They consist of a door with a 4½" opening for burner gun tubes, side pieces that can be joined to form different shaped chambers and a four-piece bottom as a base. Each is packaged separately in individual cartons. The components are manufactured to fit together easily and tightly without the use of cement. The chambers are round or oval, but pieces can be sawed or filed to form square shapes.

Ray Type AR Burner Is Automatic Horizontal Rotary

TYPE AR BURNERS in sizes 9 and 10 have been developed by Ray Oil Burner Co., San Francisco 12, Cal., to cover the field of automatic operation requiring capacities up to 700 boiler hp. Maximum ca-

A Great Tribute to a Great Line!

44% INCREASE IN NUMBER OF DEALERS IN THE PAST YEAR!
"HITCH YOUR WAGON TO THESE STARS...TOPS IN THEIR FIELD! REAL PROFIT BUILDERS!"

NATIONALLY ADVERTISED PRODUCTS FOR YEAR-'ROUND SALES

Gas, Oil and Coal-Fired Winter Air Conditioners • Gas and Oil-Fired Boilers • Oil, Gas and Electric Water Heaters • Oil Burners • Coal Furnaces • Year Around Air Conditioning Units (Heats and Cools) • Bituminous and Anthracite Stokers • Filter Blower Units • Stoker Fired Water Heaters • Room Air Conditioners • Packaged Air Conditioners • Dehumidifiers • Commercial Refrigeration • Central Systems Cooling Equipment • Marine Refrigeration • Water Cooling Towers.

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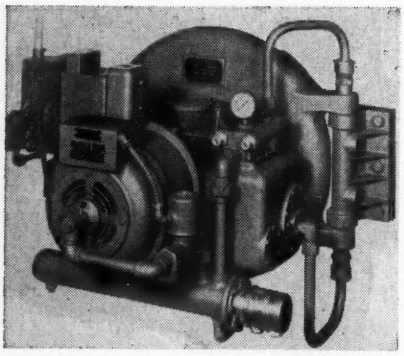
AIRTEMP DIVISION OF CHRYSLER CORPORATION, DAYTON 1, OHIO

fueloil & oil heat



pacity of size 9 is 150 gph; size 10, 210 gph. Practically all features of the present line of AR burners, built up through size 8, are incorporated in the new sizes. These include integral type dual pump, auxiliary reservoir, direct drive, dual ignition, viscosity valve and oil preheater for No. 6 oil installations. Combustion elements are interchangeable with the type AG burners.

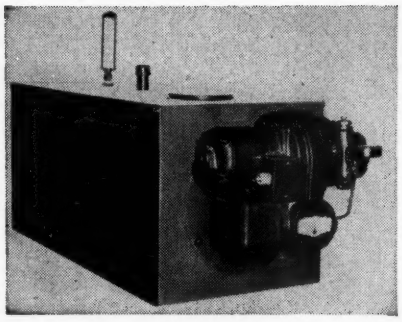
Motor sizes furnished are 5 hp on size 9, 7½ hp on size 10. The regulating oil valve, primary air butterfly valve and secondary draft door are independently connected to a new jackshaft, which is actuated by a modutrol motor. Furnace plates for the news sizes have been redesigned for greater strength and rigidity and a dual strainer, with two elements piped in parallel, is furnished as standard equipment.

Announce Foamite Fire Extinguisher for Trucks

A FOAMITE fire extinguisher, 2½ gal. capacity, has been announced by American-LaFrance-Foamite Corp., Elmira, N. Y., especially for tank trucks and similar vehicles. Model 5F-V-1 is a recently developed unit featuring monotype construction in silicon bronze, with a sealed stopper built into the top to prevent the chemicals from mixing until needed. A twist of the wrist releases the seal and the extinguisher functions. In common with foam type extinguishers, this model requires protection from freezing.

Dewey-Shepard Small Home Boiler With Built-in Coil

THE SMALL HOME BOILER, developed by Dewey-Shepard Boiler Co., Indianapolis 4, Ind., now is available with built-in, removable fin tube coil. Addition of the



coil to the unit, designed for use with baseboard, radiant or conventional hot water heating systems, has increased its capacity. The unit can be fired up to 1 gph, develops a Btu output of 110,000 and is rated at 500 sq. ft. of standing hot water radiation.

When used as a water heater, it has a recovery rate of 125 gph through a 100° F. rise, with 31 gal. storage capacity. Models may be gas or oilfired, the oilfired model incorporating a standard high pressure gun type burner.

Fire Proven Products Announces Improved Models

AN IMPROVED LINE of tankless water heaters has been announced by Fire

OIL TANKS
for
BASEMENT or UNDERGROUND

Price domestic fuel oil storage tanks are manufactured to Underwriters specifications and bear Underwriters labels.

Obround Basement (Vertical or Horizontal)			Round Underground		
Cap. in Gals.	Gauge	Size	Cap. in Gals.	Gauge	Size
275	14 or 12	27 x 44 x 60	285	12	38 x 60
220	14 or 12	27 x 44 x 48	550	12	46 x 76
235	14 or 12	22 x 44 x 60	1000	10	52 x 110

Write Today for Catalog and Prices

PRICE FIREPLACE HEATER & TANK CORPORATION
152 W. AUSTIN STREET, BUFFALO, N. Y.

PREFERRED
DRAFT-A-JUSTORS

Cut Fuel Consumption by
10% TO 30%

The *Preferred* Draft-A-Justor is the original, patented Draft-A-Justor . . . improved to include the latest in engineering developments.

Stainless steel bearings and weather resistant metals provide long-life service without breakdown due to rust or wear . . . assure *continuous* fuel savings.

Millions now in satisfactory use.

WRITE FOR DESCRIPTIVE LITERATURE AND TRADE PRICES.

SIZES
Stove, domestic and commercial sizes from 4" to 24" in diameter.
Industrial sizes from 2' x 2' to 5' x 12'.

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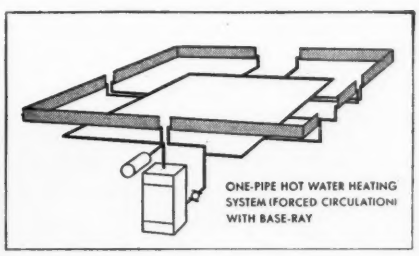
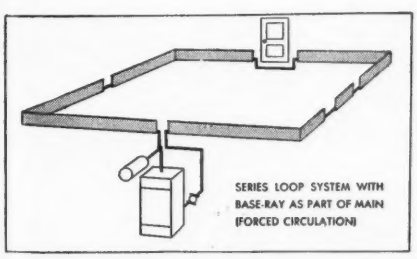
1860 Broadway, New York 23, N. Y. Boston Office: 839 Beacon St.

"Since I found out how easy it is to install, I'm recommending BASE-RAY on every job"

There is nothing difficult or complicated about putting in BASE-RAY. It can even be used as part of the main in a series hookup. (See below)


ONE-PIPE HOT WATER HEATING SYSTEM (FORCED CIRCULATION) WITH BASE-RAY


SERIES LOOP SYSTEM WITH BASE-RAY AS PART OF MAIN (FORCED CIRCULATION)

"My first BASE-RAY job sold me. These Radiant Baseboards are just as easy to install as regular heating systems. Guess I'm keeping my customers happy, too . . . they're steering a lot of new BASE-RAY business my way."*

You'll need no extra tools or "know-how" to install BASE-RAY Radiant Baseboards. As the diagrams indicate, no complicated piping layout is necessary and all connections are as accessible as those on ordinary radiator systems.

BASE-RAY is being successfully used on all types of hot water systems and on two-pipe steam or vapor jobs. Diagrams at left show one-pipe and series hookup installations. In the latter the BASE-RAY units become part of the main. The obvious economy of this arrangement will aid you in outbidding competition.

Thousands of BASE-RAY Radiant Baseboard Heating Systems are providing clean, efficient heat in homes, apartments, institutions and offices. Contractors who handled these jobs reported that BASE-RAY was easy to install.

The trend today is definitely toward radiant heating. BASE-RAY is made of *cast-iron.* No metal is more *durable, wear and corrosion resistant.* And BASE-RAY, being completely water-backed, delivers radiant heat at ankle-height from a "live" front. That's why it will pay you to specify and install BASE-RAY Radiant Baseboards.

**Reg. U. S. Pat. Off.*

NOW AVAILABLE — Matching Sheet Metal Baseboards and Fittings for giving a finished appearance to all BASE-RAY installations.

BURNHAM BASE-RAY RADIANT BASEBOARD

DON'T MISS THE BURNHAM EXHIBIT AT THE O.H.I. SHOW, PHILADELPHIA, APRIL 24-28, 1950.

Write for the Booklet — it explains with simple diagrams and brief text all any contractor needs to know to order and install BASE-RAY.

Burnham Corporation

"PIONEERS OF RADIANT BASEBOARD HEATING"

IRVINGTON, N. Y., Dept. FO-30

I.B.R. — Institute of Boiler and Radiator Manufacturers — Member

Burnham Radiant Heating Since 1873

Burnham Corp., Boiler Division Dept. FO-30
Irvington, N. Y.

Please send me copy of "Ratings and Installation Guide" on BASE-RAY Radiant Baseboards.

Name .....

Address .....

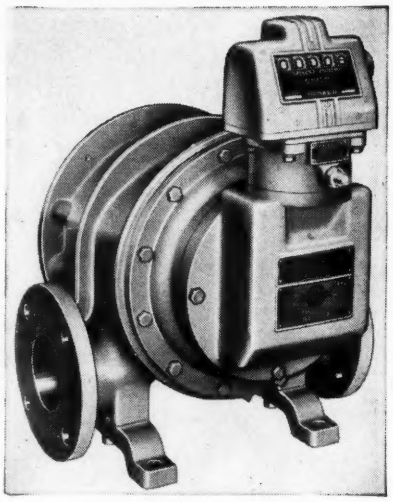
City..... State.....

Proven Products, Inc., Baltimore 2, Md. Elimination of all internal soldered connections is a feature of the line, furnished in three sizes with capacities of 3¾, 5 and 8 gpm. Internal strapping has been changed to provide stronger anchoring in the tank shell and the new models retain the feature eliminating the problem of by-passing the heater. Any air which accumulates is vented.

The heaters consist of a welded steel shell and welded-in head, with the domestic water side made entirely of bronze and copper. An aquastat tapping is provided on the heaters, which are designed for 15 lbs. maximum working pressure.

Rotorol Meter Permits Flow In Either Direction

A NEW METER, the Rotorol, announced by Bowser, Inc., Fort Wayne 2, Ind., is a rotary type with maximum capacity of 350 gpm, working pressures up to 125 spi, standard 3" pipe flanges. It may be installed vertically or horizontally and is available in models equipped with large-numeral, straight reading dial or ticket printer. The dials may be set to



face in any of eight directions. A simple gear change permits flow through the meter in either direction.

Designed for tank truck, bulk plant and similar uses, Rotorol is equipped with stainless steel ball bearings and needle-type roller bearings on the rotor shaft and cam rollers. Interior rotating parts are aluminum die-cast, anodized aluminum and cadmium plated steel to resist rust and corrosion. Positive displacement measurement is accomplished in a precision chamber during each quarter revolution of the rotor.

Heat-O-Meter Calculator Adds Data On Radiation

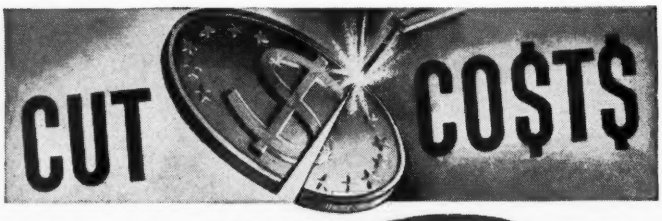
THE 1950 EDITION of the heating calculator made by Heat-O-Meter Co., New York 18, N. Y., has been announced. Designed for quick calculation of steam and hot water heating radiation requirements, the device operates by simple adjustments of a dial.

The new model contains sizes, capacities, minimum and maximum heights for old and new style radiators, mains, risers, returns, chimneys, round and sectional boilers.

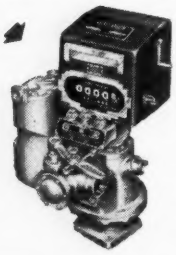
Hastings Model A Air Meter With Temp. Compensating Probe

MODEL G air meter, announced by Hastings Instrument Co., Hampton, Va., provides instantaneous, direct readings of air velocities from 5 to 6,000 fpm, with an expanded scale in the low velocity ranges. It is available with a built-in temperature compensating probe to prevent momentary error in readings when the probe is subjected to sudden temperature changes.

A group of accessories is offered, including a carrying case, with battery-



Model TD Truck Meter



Model LJ—4" Line Meter

GRANCO fast flow meters
speed truck or bulk plant delivery

GRANCO Meters cut overhead, enable your tank trucks to make more "dumps" per day. How? Because they have . . .

★ faster flow — extra large metering chamber allows for greater through-put to each revolution of rotor.
★ lower head loss — smooth, pivot action of exclusive GRANCO "floating" rotor offers minimum resistance to flow.
★ sustained accuracy — over wide range of flow.
★ longer trouble-free life — slower mechanical speeds, fewer moving parts mean less wear . . . long, continuous service.
★ Quick, accurate calibration—only rotary meter with easy, positive adjustment.

BUY GRANCO METERS—YOU'LL BE MONEY AHEAD!
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Most Powerful Chevrolet Trucks Ever Built!

Plenty of power—and dependable power—to handle heavy loads at lowest cost! Two great engines bring you new power, new stamina, new and spectacular performance with economy. These 1950 Chevrolet P•L trucks are the most powerful trucks Chevrolet has ever built.

In performance, popularity, payload and price, Chevrolet is the outstanding leader! Chevrolet is the nation's choice for every trucking job . . . and on each job, these P•L trucks have established their right to leadership by years of outstanding service.

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DETROIT 2, MICHIGAN

Far ahead with all these PLus *Features:*

• **TWO GREAT VALVE-IN-HEAD ENGINES: the New 105-h.p. Load-Master and the improved 92-h.p. Thrift-Master—to give you greater power per gallon, lower cost per load** • **THE NEW POWER-JET CARBURETOR: smoother, quicker acceleration response** • **DIAPHRAGM SPRING CLUTCH for easy action engagement** • **SYNCHRO-MESH TRANSMISSION for fast, smooth shifting** • **HYPOID REAR AXLES—5 times more durable than spiral bevel type** • **DOUBLE-ARTICULATED BRAKES—for complete driver control** • **WIDE-BASE WHEELS for increased tire mileage** • **ADVANCE-DESIGN STYLING with the "Cab that Breathes"** • **BALL-TYPE STEERING for easier handling** • **UNIT-DESIGN BODIES—precision built.**

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ADVANCE-DESIGN TRUCKS

P*opularity L*eaders

The public's overwhelming preference for Chevrolet is proof of owner satisfaction earned through the years. Beyond question, Chevrolet P•L trucks are the nation's leading choice in the entire truck field.

P*erformance L*eaders

The new Chevrolet P•L trucks give you high pulling power over a wide range of usable road speeds—and on the straightaway, high acceleration to cut down total trip time.

P*ayload L*eaders

The rugged construction and all-around economy of Chevrolet P•L trucks cut operating and repair costs—let you deliver the goods with real reductions in cost per ton per mile.

P*rice L*eaders

From low selling price to high resale value, you're money ahead with Chevrolet trucks. Chevrolet's rock-bottom initial cost—outstandingly low cost of operation and upkeep—and high trade-in value—all add up to the lowest price for you.

CHEVROLET

INGERSOLL

HEAT-RESISTANT STAINLESS STEELS

GIVE ALL FOUR!

-when used for Combustion Chambers

1. MORE QUIET BURNER OPERATION
2. CLEANER HEAT
3. BETTER TEMPERATURE CONTROL
4. CONSIDERABLE SAVINGS ON FUEL COSTS

If you are using or contemplating the use of heat-resistant stainless steels for combustion chambers for oil burner furnaces, we are specialists in producing these types of steels. Whether you are a large or small user of these steels our steel making facilities can offer exceptional service by especially shearing to your specified combustion chamber steel blanks, or multiples thereof. Write us for additional information.

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BORG-WARNER CORPORATION
310 SOUTH MICHIGAN AVENUE • CHICAGO 4, ILLINOIS

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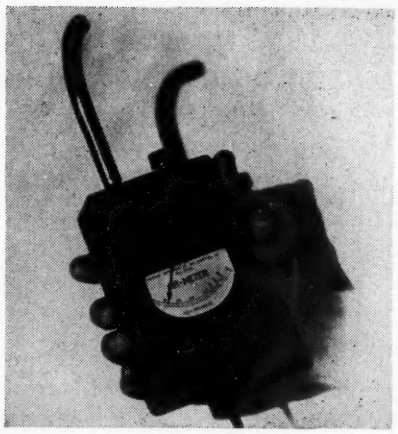
Plants: Chicago, Illinois • New Castle, Indiana • Kalamazoo, Michigan



operated power pack for use when 110 volt AC current is not available. It is intended for use in air conditioning work and other applications when immediate air velocity readings are desired.

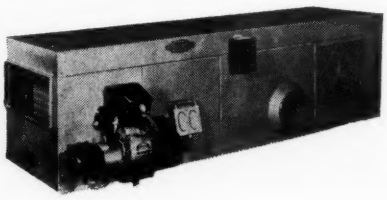
Republic Tube Benders In Hand or Bench Models

THREE MODELS of hand or bench model tube benders are available from Republic Mfg. Co., Cleveland 2, Ohio. The bench bender handles tubing from 3/8" to 1 1/4" sizes and may be post, bench or stand-mounted. Two models of hand benders cover ranges of 1/4" to 1/2" and 3/8" to 3/4", respectively. Tubing of soft copper, brass, aluminum or fully annealed steel may be bent to desired angles. Shapes may be bent with special radius blocks.

Artcraft Series "S" Furnace Is Ceiling-Suspended Unit

ARTCRAFT Series "S" furnace-burner units, produced by Chicago Steel Furnace Co., Chicago 17, Ill., may be gas or oilfired and is intended for ceiling-suspended installation. The direct-fired unit heaters have been designed for installations in buildings, stores, garages and similar places where floor space is at a premium. Models are available with output capacities ranging from 75,000 to 350,000 Btu, firing rates up to 3.5 gph.

The units feature a counterflow heat exchanger and multiple baffled flue passages. Heating surface for the small size

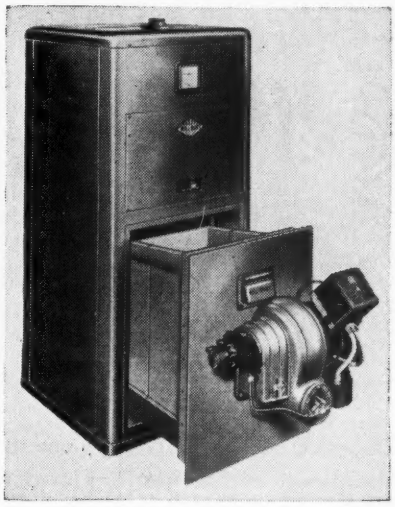


unit totals 6,939 sq. ins., increasing to a total of 21,816 sq. ins. for the largest size.

The ceiling-suspended units are in addition to a line of surface type direct-fired space heaters, beginning with an output of 350,000 Btu, up to an output of 1,000,000 Btu.

Will-Burt Develops Oilfired Hot Water Heating Boiler Unit

A STEEL, RESIDENTIAL hot water heating boiler now is in production at the Will-Burt Co., Orrville, Ohio, fired with an electronically-controlled pressure atomizing oilburner. Design is a combination of water tube, fire tube and refractory-



lined firebox construction, featuring long fire travel. Normal 6" thickness of Fiberglas insulation is compressed into the 3" space between inner gas-tight, high-temperature-resisting Armco aluminized steel casing and the other jacket.

The unit, 55½" high, requires a 25" square of floor space and is available in two sizes. Ratings are 640 sq. ft. hot water radiation using a 1 gph burner nozzle; 880 sq. ft. using a 1.25 gph nozzle.

Equatemp Balancing Valves For Radiant Heating Systems

EQUATEMP is a bronze balancing valve for hot water radiant heating systems, developed by Ohio Brass Co., Mansfield, Ohio. It provides both leak-tight shut-off and adjustable flow in a single valve, available with solder-type ends in sizes ⅜" to ¾", or with screwed ends in sizes ¾" to 1½". The models are designed to accommodate any of several standard

for Oil Marketers who **MUST CUT COSTS!**

2 new selling tools

NEW BOWSER ESTABLISHED 1885

ROTOROL

350 g.p.m.

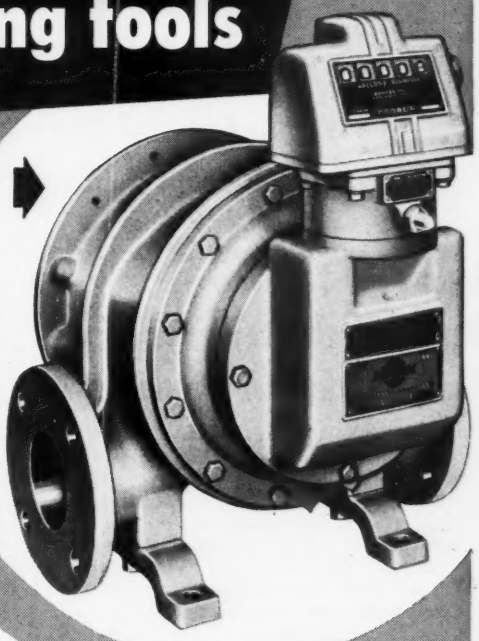
A compact rotary meter for tank trucks, transports and bulk plants. High-speed, accurate deliveries—positive displacement measurement.

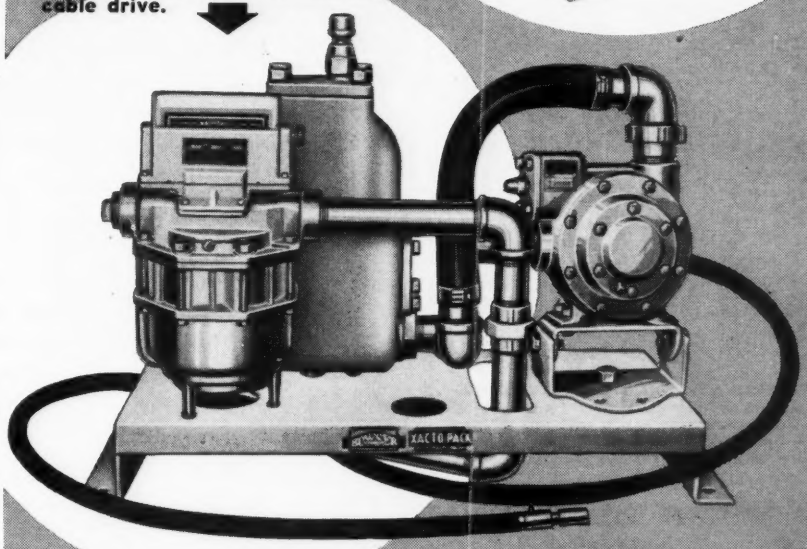
NEW BOWSER ESTABLISHED 1885

XACTO PACK

25 g.p.m.

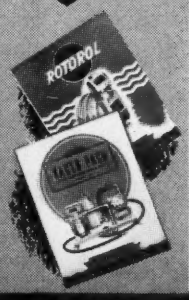
For tank trucks. Accurate measurement by the famous Xacto meter. Adjustable trunnion base for in-line installation of flexible cable drive.





Choose one or both of these new selling aids!

PLEASE MARK YOUR CHOICE AND MAIL THE COUPON TODAY



BOWSER, INC., 1330 Creighton Ave., Fort Wayne 2, Ind.

Please mail the following folders RUSH!

☐ Figure 445 ROTOROL

☐ Figure 395 XACTO PACK

Company.....

Name.....

Address.....

City.....

LIQUID CONTROL SPECIALISTS SINCE 1885

CASH IN ON SALES OF *Klemm* FUEL OIL FILTERS NOW!

Sells Fast . . .
Market Unlimited . . .
Good Markup . . . Repeats

You, more than anyone else, have an inside track to get extra income from the sale of Klemm Oil Filters. You know *who* gets oil, *how* they use it, and *which* oil-fired utilities *need* a Klemm filter. You can sell Klemm Oil Filters easily . . . and make a good profit on every sale. What's more, you'll get extra business too from the sale of Chemistone filter elements.

Klemm Oil Filters remove all water, dirt, sediment, rust, and all foreign matter from fuel oil . . . help make customers happy with the oil you sell. Metal bowl units listed Underwriters' Laboratories. All sizes available for every filtering need.

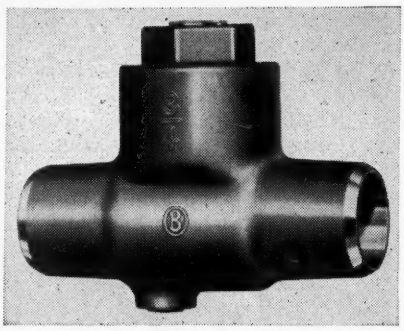
ORDER A SUPPLY FROM YOUR JOBBER TODAY

SILENT SALESMEN

Packed 12 to a carton, Klemm JR model oil filters take little counter space yet do a BIG job of selling themselves. Customers are attracted TO and buy direct FROM this attractive display carton.

ATTRACTIVE DISCOUNTS TO JOBBERS AND DISTRIBUTORS. WRITE FOR FULL DETAILS TODAY.

Klemm
AUTOMOTIVE PRODUCTS CO.
1718 N. Damen Ave., Chicago 47, Ill.



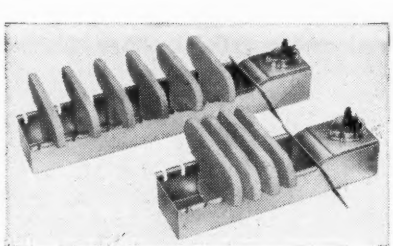
venting attachments, and, in addition, a well is drilled into the stem to facilitate taking temperature readings.

Closing and balancing actions are accomplished by a butterfly-type disc, fitted with a composition rubber "O" ring. The straight-through design of the valve's oversize port is described as permitting optimum flow through valve and elimination of turbulence. If desired, Equatemps can be buried up to their collars in cement for floor radiant heat installations, or in plaster for ceiling or wall panel systems.

Combustioneer Introduces Two Models of Humidifiers

MODELS CH-200 and CH-300 humidifiers have been announced by the Combustioneer Div., Steel Products Eng. Co., Springfield, Ohio. The former is a long model, extending 20⅞" inside warm air furnaces; the latter a short model, extending only 12½" inside the furnace. Model CH-200 is designed for the largest homes and small commercial warm air installations and provides a maximum of 816 sq. ins. of evaporating surface. The short model, CH-300, is described as particularly adaptable to oilfired units with small plenums and provides a maximum of 408 sq. ins. of evaporating surface.

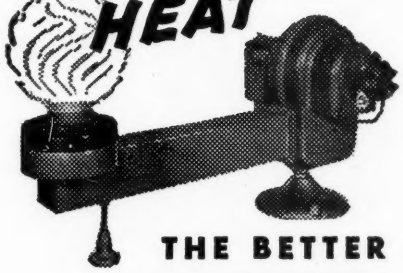
Dual saddle valves, furnished on both models, are submerged constantly in water, employ a Monel metal float and have all linkage in the float assembly fitted with stainless steel pins. Ceramic evaporator plates feature an exclusive design to prevent dripping, and the humidifier's stainless steel pans are used for their resistance to rust and corrosion. Copper tubing and all necessary fittings are furnished.



Walton Finishes Cabinet Humidifier in Lighter Grain

A BLONDE MAHOGANY grain now is available for the cabinet model humidifiers made by the Walton Laboratories, Inc., Irvington 11, N. J. Both single and duplex cabinet models can be furnished in either this finish or walnut. No changes are contemplated for the table

SWIRLING HEAT



THE BETTER OIL BURNER!

PRESSURE ATOMIZING: Combustionhead, with vertical nozzle, is located inside the furnace or boiler. Pressure air, guided by "Swirlator," mixes with oil vapor to produce a highly turbulated volatile mixture resulting in a swirling ball of flame.

- **NO COMBUSTION CHAMBER REQUIRED**
- **NO CARBONIZING ON NOZZLE OR IGNITION POINTS**
- **HIGHER CO_2 — GREATER COMBUSTION EFFICIENCY**
- **INSTALLATION PROBLEMS GREATLY SIMPLIFIED**
- **BURNS THE NEW TYPE OILS**

Write for Literature — We are looking for live, experienced dealers. Let's Get Together!

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1775 Broadway, New York 19, N. Y.
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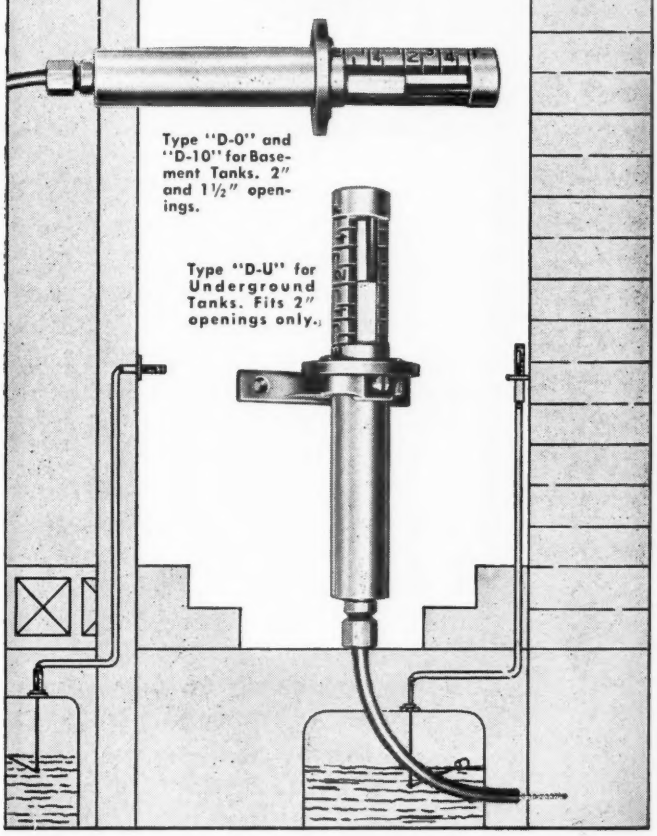
Sentry AT·A·GLANCE REMOTE READING Tank Gauges

For accurate, easy reading of tanks — indoors, outside or underground.



Simple, Inexpensive, Dependable Easy to Install Gauges for every use

Long wanted — long needed. Sentry now brings you remote reading gauges that accurately indicate correct liquid level at all times. Accuracy not affected by changes or variations of specific gravity of oil. Can be installed with or without additional gauge on tank for dual location reading. No unnecessary fittings, bulbs or levers for oil man to tamper with . . . no need for access to building. Stainless steel and brass extension lines—cast aluminum, weatherproof thermometer type indicator, calibrated in fractions. Easy to read — unconditionally guaranteed. Write for descriptive folder showing complete line.

KRUEGER Sentry GAUGES

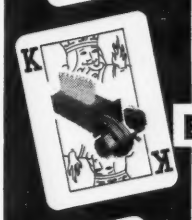
GREEN BAY • WISCONSIN

Let's Lay the Cards on the Table THE KRESKY HAND is the "PAT" HAND

Only *Kresky* Puts Into Your Hands Five Cards to Win Every Pot . . .

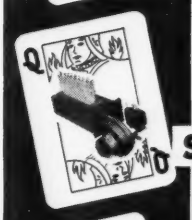
KRESKY BURNER

Kresky, and only ***Kresky***, has famous Patented ***Kresky*** Forced Air Induction Burner you can actually demonstrate to your customers.



EXPERIENCE

There's no substitute for 40 years of ***Kresky*** experience. You're sure ***Kresky*** ratings, specifications, dimensions are job-proved for performance, low installation costs.

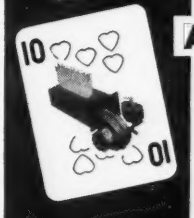


SATISFACTION

You can satisfy any customer with ***Kresky*** . . . the world's largest line of oil heating equipment.

POLICY

Big or small, you are protected by the ***Kresky*** "no exception" policy.



ACCEPTANCE

Extensive advertising, plus case histories, prove ***Kresky*** is sold easier.

Listed Underwriters Laboratories, Inc.

GET IN ON THE KRESKY DEAL

WRITE TODAY!

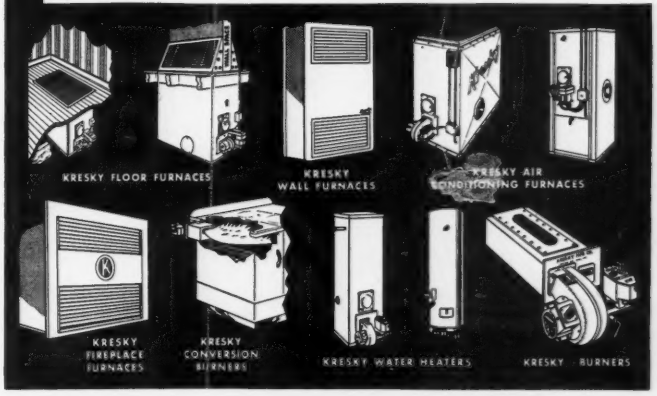
Kresky OIL BURNERS

Since 1910

KRESKY MFG. CO., INC.

100 H STREET

PETALUMA, CALIFORNIA



Accurate Answers
demand
Accurate Data

FOR PRECISE READINGS ON
RELATIVE HUMIDITY
and TEMPERATURE
. . . RELY ON BENDIX FRIEZ

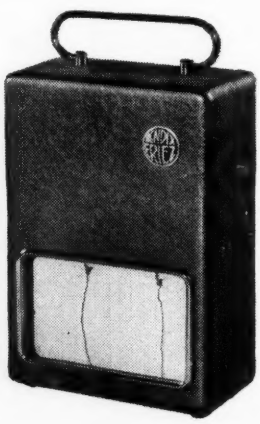
Accurate checking of heating and air conditioning installations is essential to proper operation. And proper operation is, in turn, essential to comfort in the home and peak efficiency in many industrial operations. Bendix-Friez precision instruments, built to U. S. Weather Bureau standards, furnish the exact information that both the customer and the contractor need. Write for complete information.

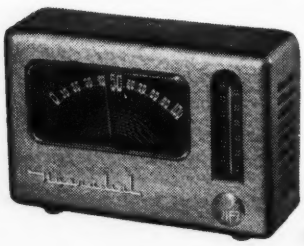
BENDIX-FRIEZ

MODEL 160

Portable Humidity and Temperature Recorder

3" x 5" charts, 10 or 30 hour records. Modern design . . . handy for small space and difficult locations . . . built to meet unusual conditions.





BENDIX-FRIEZ

Hygrodial

Precision Humidity and Temperature Indicator

Hair-operated and calibrated to professional standards of accuracy by the maker of the world's finest weather instruments. Handsome, modern case—4" high, 5½" wide, 1⅝" deep—desk or wall mounting.

FRIEZ INSTRUMENT DIVISION of
1322 Taylor Avenue
Baltimore 4, Maryland

Bendix AVIATION CORPORATION

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

model humidifiers that Walton makes.

The cabinet humidifiers are automatically controlled, evaporating 5 and 10 gals. of water into the air per day.

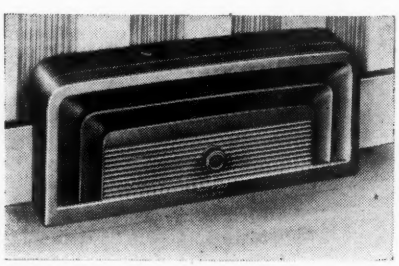
Delta Adds Model LA-300 To Boiler-Burner Unit Line

ENGINEERED for installation in the small home, model LA-300 oilfired boiler-burner unit has been added to the line of Delta Heating Corp., Jackson Heights, N. Y. It is fired with a flange-mounted, 1 gph gun type burner, and has a net rating of 320 sq. ft. steam, 510 sq. ft. for hot water radiation.

Built under ASME steel construction standards with ¼" shell, 10 gauge boiler tubes and 5/16" crown sheet, the new unit is equipped with a built-in tankless coil. The unit may be furnished with flush or extended jacket and has been designed especially for utility room installations, where quiet operation is a consideration.

Floor Type Register For G-E Air Wall System

A FLOOR TYFE REGISTER has been announced by the Automatic Heating Div., General Electric Co., Bloomfield, N. J., for use with its Air-Wall heating system. The system features prefabricated small diameter ducts and elbows, distributing forced warm air upward



in a fanlike pattern through special registers.

The floor type register requires a floor opening only 1-15/16" in width and can be used readily in conversion jobs or for installation in new homes. The register is installed vertically and is furnished complete to include a die-cast aluminum register, a sheet metal stackhead and boot.

Infra Announces Type 6 Aluminum Thermal Insulation

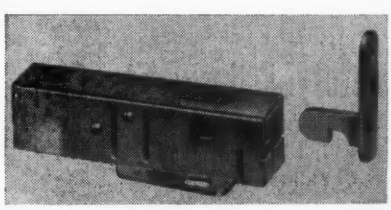
TYPE 6 aluminum thermal insulation, announced by Infra Insulation, Inc., New York, N. Y., consists of three permanently separated metal sheets and two fiber, flame, mold and vermin-proof partitions. It is an improvement on previous models and incorporates three pure aluminum sheets spaced 1¼" apart, six heat ray repellent surfaces, two outer reflective spaces and four inner rows of alternating, reverse, triangular reflective spaces. Permeability to water vapor is zero.

Type 6 is installed in ceilings and floors, between beams, under concrete floors and ceilings, over concrete slabs, under or over radiant heating panels. Installation is said to require no special skill, with speeds of 2,000 sq. ft. a day quickly attained.

National Lock Has Complete Line Of Equipment Hardware

APPLICABLE to oilburners, heating units, humidifiers and similar equipment is the complete line of latches, handles, hinges, catches, screws and bolts available from National Lock Co., Rockford, Ill. In producing many of the items, the company utilizes extensive plastics and die-casting facilities, with particular emphasis on both durability and eye-appeal. A major advantage of the complete line is the ease with which a manufacturer or fabricator can rely on one source for his components.

The National Tutch Latch, a positive action latch for units with swing doors, is included in the line. Concealed



HAND IN HAND
Paracoil WATER HEATERS

Have been linked with PROFITS for the many thousands of jobbers stocking them and the contractors installing them—for they represent the best in proven design and service-free performance.

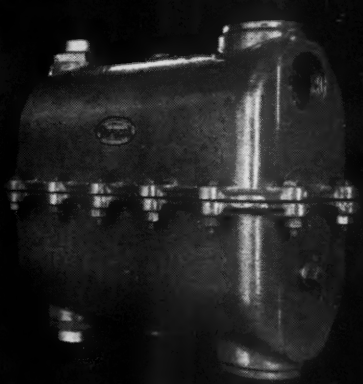
Every type and size available—for every type and size of installation!

- Type A—**Indirect Water Heaters**
- Type B—**Apartment House Heaters**
- Type C—**Submerged Tank Heaters**
- Type D—**Tankless Water Heaters** (Gravity Circulation)
- Type E—**Tankless Water Heaters** (Forced Circulation)
- Type I—**Instantaneous Water Heaters** (Steam Type)

Heating Elements for Storage Tanks
Convertors for Forced Hot Water or Radiant Heating Systems
Condensate Coolers • Flexible Nipples

A TYPICAL PARACOIL VALUE!

Type D Tankless Heater
Gravity Boiler Water Flow
3.5 and 5 G.P.M.— 40°F to 140°F
Boiler Water 180°F
All Copper Water Circuit—C.I. Shell
Low Pressure Drop—
Streamlined Design!



Write for Catalog Material and Prices!

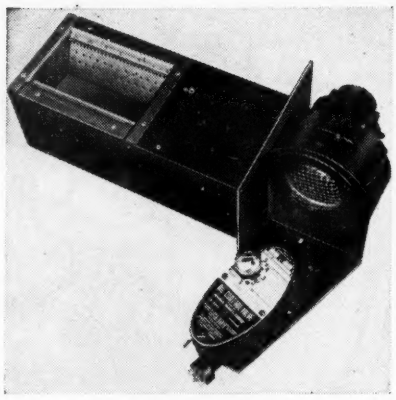
DAVIS ENGINEERING
CORPORATION
1058 E. Grand St., Elizabeth 4, N. J. • 30 Rockefeller Plaza, New York 20, N. Y.

from exterior view, the latch automatically opens a door when the door is touched with finger, wrist or elbow. It is furnished for both wood and metal units.

Benner-Nawman Offering Five Oilfired Furnaces

FIVE MODELS of oilfired floor, wall and surface type furnace-burner units are available from Benner-Nawman, Inc., Oakland 8, Cal., all using a Multi-Stage burner, developed by Jack Thomson in Canada during 1945 and 1946. There are two models of floor furnaces and two wall furnaces, developing an output of 52,500 and 72,500 Btu, respectively. One surface type furnace unit for installation on combustible floors develops 93,000 Btu output. The smaller floor and wall furnaces measure 24 x 30 x 36, the larger, 24 x 42 x 36. The surface type furnace has dimensions of 24 x 36 x 60.

Limit switches on the units act as safety controls and react only under emergency conditions. Burners shut down from high fire to pilot fire within thirty seconds, according to the manufacturer, exclusive of the minute it takes the limit control to function.



Lynn Adds Spiral-Ex Combustion Head to Line

LYNN PRODUCTS CO., Lynn, Mass., has introduced a new burner head design in the Spiral-Ex used on current models. Developed by the company's engineering department, under the direction of E. C. Leach, it is reported that hundreds of satisfactory installations have been using the head for more than a year.

The Spiral-Ex is so constructed as to eliminate complicated operations, with air adjustment and coordination of oil spray and air made with the burner under fire. It is standard equipment on five models of Lynn high pressure atomizing oilburners, with capacities from .65 to 15 gph.

Alfol Asbestos Wrap For Insulating Pipes, Ducts

ASBESTOS pipe and duct wrap, produced by Alfol Div., Reflectal Corp., New York 17, N. Y., is made of sheet or corrugated asbestos, firmly bonded to a sheet of pure aluminum foil. Due to its light weight and ease of application, it is estimated that its cost will total less than 6¢ per sq. ft. in normal usage. Sheets of Alfol are fitted to steam pipes or sheet metal ducts with a slight overlap, secured by standard insulation bands.

Petro Announces W-A-E Burner for Preheated No. 5

TO MEET THE NEED for a burner to handle the more viscous type No. 5 fueloil presently available, Petroleum Heat & Power Co., Stamford, Conn., has intro-

When You Use

SUPER SAW

AIR COOLED

PATS. PEND.

You Save

Time and Money On Your Oilheating Jobs

Super-Saw cuts directly into wood floors, walls, siding, etc. WITHOUT a "starting hole." Users tell us it cuts their "Roughing-In" Costs 75%. It has no torque or spin, is easy to handle, and is equipped with a blowing attachment that cools the tool and blows away sawdust and chips from the cutting line.

SUPER-SAW is carried by better jobbers in the U.S.A. and Canada. Write us for free, illustrated booklet.

R C S Tool Sales Corporation

Dept. O.H. Chalstrom Bldg., Joliet, Ill.

Make Your Hearths With the Original R & I Hearth Cement

You can be sure you're using the right cement to make your rotary hearth when you use R&I Hearth Cement, the original castable refractory.

Since it was introduced over 20 years ago oil burner men have poured thousands and thousands of hearths made of this cement. Many are still in service.

To use, simply mix with water and pour over the sheet metal hearth plate of rotary burners. A quick troweling gives it a smooth, hard surface that is extremely rugged.

Get it from your supply house. Write us for Bulletin OB-101.

Refractory & Insulation Corp.

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Chicago 4, Ill. - Newark 2, N. J.
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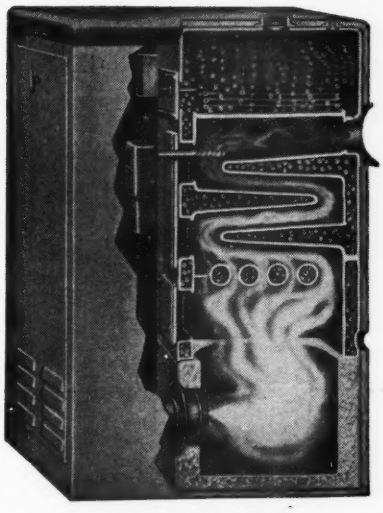
Steel HEATING UNIT



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Write for full particulars about Exclusive Franchise for your territory on our full line of MAGIC-HEAT Boilers and Boiler-Burner Units.

Magic-HEAT

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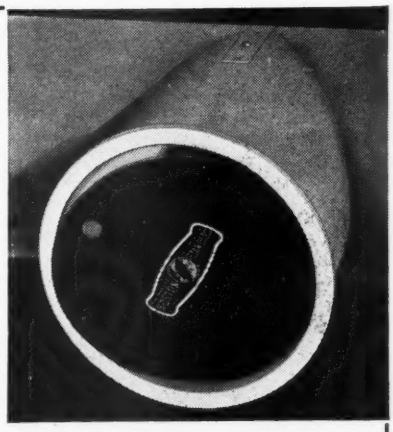
MARIETTA, PENNA.

BOSTON-STANDARD DRAFT CONTROL



The World's Most Accurate DRAFT CONTROL

For Efficiency— Hold that Draft!

Ordinary chimney drafts fluctuate from .02 to .25 inches or more, due to varying winds, atmospheric conditions and temperature changes. A draft control should compensate for all of these changes and hold a *constant* pull on the heating unit correct for that particular heater.

If the draft pull on the heater is greater than it should be, because of no control or an inefficient one, the heat travel through the heater is greater than it should be, hence the heating unit does not have a chance to absorb the heat before it is through it and up the chimney.

Without a good draft control, every variation in the chimney draft causes a change in CO_2 reading, resulting in increased cost of operation.

The BOSTON-STANDARD DRAFT CONTROL with its patented CENTER-MOUNTED GATE, will hold the proper draft on the heating unit *constant*.

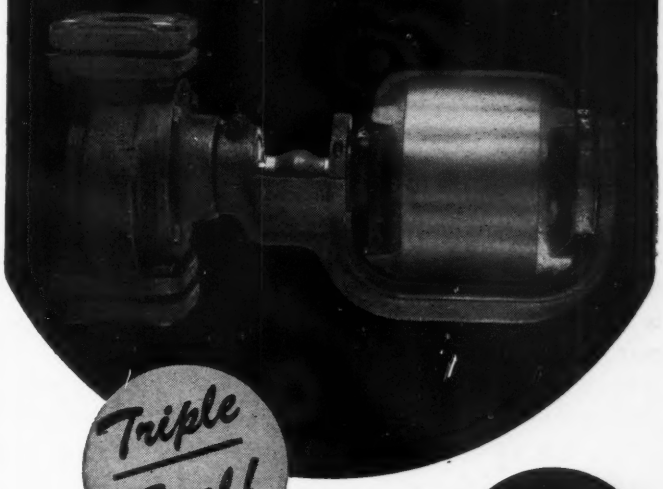
MODELS READY FOR SHIPMENT { 223-C300—7″ gate for 5″, 6″, 7″, 8″ pipes
223-C301—9″ gate for 7″, 8″, 9″, 10″ pipes

Larger sizes (Ball Bearing Pivots) 12″, 16″, 20″, 24″

BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Division, Manufacturers, Lynn, Mass.

GLOBE

HOT WATER CIRCULATORS



Triple Seal!

Quiet!

- ★ Hardened Steel Shaft, precision ground
- ★ Water Seal—Hardened stainless steel face to carbon
- ★ Extra-long, OILITE, oil-impregnated Bronze Bearings
- ★ Flexible Neoprene Coupling
- ★ 1/6 hp Westinghouse or equivalent Motor

These quality components, together with GLOBE precision engineering, make the quiet, rugged GLOBE Hot Water Circulator the most outstanding circulator buy in its class.

Tested!

Guaranteed

Manufacturers of Low Water Cut-Offs and Controls for a Quarter Century

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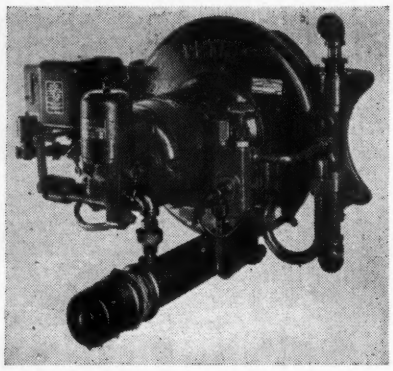
81 WARREN STREET, NEWARK 2, N. J.

EXCLUSIVE TERRITORIES AVAILABLE

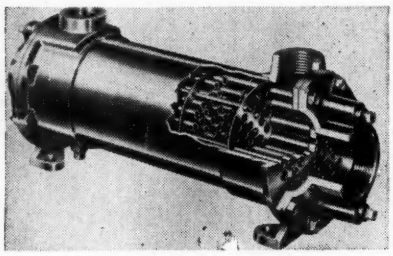


duced the Petro model W-A-E. The burner is designed to use No. 5 oils which require a moderate amount of preheating—oils having a viscosity ranging from 300 secs. Saybolt at 100° F. up to 40 secs. Saybolt Furol at 122° F.

Identical in all respects with Petro's model W for cold No. 5, the new model adds a thermostatically-controlled electric heater or tempering element, which is factory-mounted and is an integral part of the burner. Available in belt-driven or built-in motor types to meet all electrical characteristics for capacities up to 100 gph. Full automatic, semi-automatic or manual operation; fixed, compound or modulated firing are possible.

Ross Produces Standardized Stainless Steel Exchanger

TYPE SSCF all-stainless steel heat exchanger, described as the first such unit

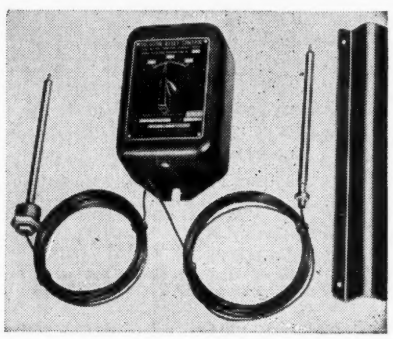


to reach mass production, has been announced by Ross Heater & Mfg. Co., Inc., Buffalo 13, N. Y. Complete standardization of all component parts has enabled production of the unit.

It is identical in design and capacities with Ross type BCF all-copper and copper alloy exchangers, the new models utilizing stainless steel to avoid contamination of fluids or corrosion. The new series incorporates all recent advancements in Ross thermal engineering and is offered in a complete range of sizes, tested to 450 psi. Type 316 stainless steel is the standard material used, but special orders can be filled using any of the other types of stainless steel.

Dual-Bulb Thermostat For Water Heating Systems

THERMAL LAG in domestic or industrial hot water heating systems is minimized by a new dual-bulb thermostat announced by Barber-Colman Co., Rockford, Ill. The control regulates the supply water temperature in proportion to the outside temperature by an outdoor bulb which adjusts the thermostat con-



trol point to anticipate changes in heating requirements.

An indoor remote bulb located in the hot water supply line controls a boiler by-pass valve and the oilburner to

Quality stands the test!

IT PAYS TO BUY A

KENT

Double Suction

FURNACE CLEANER

- Dust bag is inside the can—less chance of tearing
- Separates into 2 parts—easy to carry
- Low center of gravity—prevents tipping

The sturdy, reliable KENT gives you long life with fewer breakdowns . . . you can depend on KENT quality, design, and workmanship to do the job when you want it done. Compare KENT before you buy any Furnace Cleaner!

CLEAN WITH KENT EQUIPMENT

THE KENT COMPANY • 434 CANAL STREET • ROME, NEW YORK

WATCH YOUR SMOKE!

with

DWYER TRANSPARENT

SMOKE GAGE

KNOW what your burner or furnace is doing—BE SURE you are getting the maximum amount of CO_2 with clean combustion. The DWYER Smoke Gage gives you an actual sample of smoke for comparison with the DWYER Smoke Chart. For greater fuel saving efficiency with soot-free burning, it's the DWYER Smoke Gage . . . . precision-made, accurate, inexpensive!

HOW TO USE IT: With Smoke Gage terminal tube in smoke pipe opening, force smoke sample through paper in Gage holder with aspirator bulb. Remove paper and compare with Chart. It's that easy!

DWYER No. 910 Smoke Gage . . $8.50 Complete

(DWYER 910-S Smoke Gage, for use with DWYER Combustion Test Set, no duplication of parts . . . . $4.50)

Write for literature describing the complete line of DWYER Test Instruments—Manometers, Draft Gages, etc.

F. W. Dwyer Mfg. Co.

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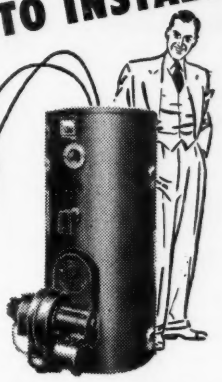
Easier TO BUY TO SELL TO INSTALL

ALDRICH Packaged BOILER-BURNERS



You make more net profit on each sale because compact Aldrich Boiler Burner Units are packaged fully erected, ready to install.

You make more because Aldrich gives your customers a better price, more usable living space, interchangeable oil and gas burners, more heat with less fuel, other important advantages.

UNIQUE NEW "BANTAM," rated at 100,000 BTU per hour is especially designed and priced for modern low-cost homes. 45 in. high; occupies 20x33 in. floor space. Provides heat and domestic hot water in excess of FHA requirements.

SERIES "B" Heat-Pak Units give dependable, efficient performance on all types of steam or hot water heating systems. Six sizes 118,000 to 808,000 BTU. Ideal for residences, commercial and industrial establishments. All Aldrich Boiler Burners also available for hot water supply only.

ALDRICH

ALDRICH COMPANY

103 East Williams St., Wyoming, Ill.

Subsidiary of Breeze Corporations, Inc.

ALDRICH HEAT-PAK PRODUCTS

JOBBERS: You'll make more money with Aldrich—write for facts about Aldrich Boiler Burner Units and Aldrich precision built oil burners; models from .75 to 19 GPH. **DEALERS:** Write for name of nearest jobber.

ANOTHER BREEZE MARK PRODUCT

The Perfect Team-Mate of the FYRITE Combustion Test Kit

TRUE-SPOT

TRADE NAME

SMOKE TESTER

A unique vinolite-protected "Scale of Soot" is supplied with each TRUE-SPOT.

Indispensable for Adjusting Oil Burners for Maximum Fuel Economy and Clean Combustion

Smoke discs like that shown at the left are obtained by simply drawing, with six pump strokes, a sample of the combustion gases from the furnace flue. Drawing the sample through the tester will turn the test disc to a shade of gray, which will vary from light to dark depending upon the smokiness of the flame. The disc is then removed from the tester and the soot content of the gas sample is measured by comparing the discoloration of the disc with the nine shadings on the "Scale of Soot." This unique scale tells you the limits of permissible smoke for various burners and types of heating systems. 100 test discs are supplied with the instrument. The handle is designed to hold test discs so that they are protected, and conveniently at hand at all times.

The TRUE-SPOT is available separately or as part of a complete combustion test kit. Ask your jobber or write for Leaflet 752.

BACHARACH INDUSTRIAL INSTRUMENT CO.

7000 Bennett Street · Pittsburgh 8, Pa.

NUMBER 7 ...the AIR-VENT you can forget... NOT REGRET!

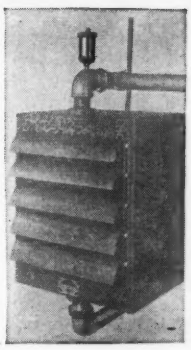
3 Styles for water pressure up to 75 lbs.

No. 7 Auto-Vent illustrated.

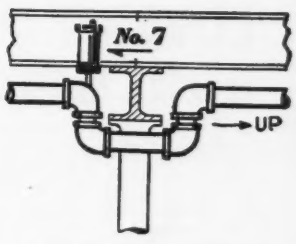
When installing an air vent on hot water heating systems, radiators, convectors, baseboard radiators, unit heaters, etc., be sure it's truly automatic. With Maid-O'-Mist Auto-Vents you can automatically vent out the air that causes circulation trouble and heating waste. More and more contractors who value satisfied customers are installing these trouble stoppers. No air chamber is required . . . quick and easy to install. See your jobber or write for data and attractive prices.

"Get that Air Out and Keep it out" with Auto-Vents

Note other "Spots" where AUTO-VENTS protect your work



Venting Hot Water Unit Heater



Venting Trapped Mains and Circulating Lines

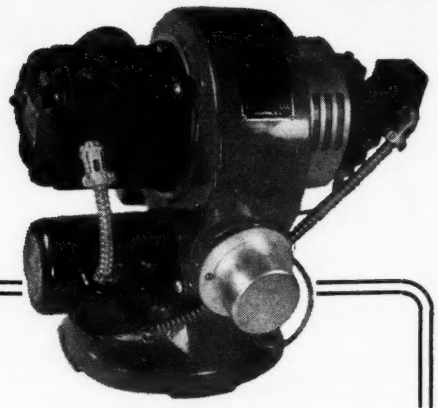
MAID-O-MIST INC.

3221 N. PULASKI ROAD

CHICAGO 41, ILLINOIS

AUTOMATIC HUMIDIFIERS FOR ALL TYPES OF HEATING SYSTEMS

SAVE UP TO 30% IN FUEL COST
WITH THE NEW
TRU-HEET OIL BURNER
Equipped with PATENTED COMBUSTION HEAD
CO_2 as high as 15%—no smoke. Oil rate 0.50 to 10.00 G.P.H.
BOILER AND AIR UNITS
Write today for full information on this PROFIT LINE to:



TRU-HEET OIL BURNER
TRU-HEET COMPANY, 532 Miller Ave., TRENTON, N. J.
Manufacturers of Fine Oil Burners Since 1928

maintain supply water temperature. Equipped with adjustment for minimum supply water temperature, thermostats are available for proportioning or two-position control.

Air Controls Window Fans Restyled and Redesigned

A LINE of 14" and 16" window fans, which double as night cooling units and daytime air circulators, has been restyled and redesigned by Air Controls, Inc., Cleveland 14, Ohio. High velocity outputs are 1200 and 1400 cfm, with a two-speed switch enabling a selection of high velocity for rapid movement and a slower speed for gentle air-moving.

Both weigh 20 lbs., are equipped with close-mesh rear and front grilles, and measure 18⅞" x 18⅞" x 10".

Radiation Releases New Series of Furnace-Burner Units

A NEWLY DEVELOPED line of gas or oil-fired steel winter air conditioning units has been announced by Radiation Furnace Corp., Benton Harbor, Mich. Oil furnaces, offered in the RGO series, have bonnet outputs of 100,000, 140,000 and 200,000 Btu, with a hi-boy model nearing completion. All models incorporate the double radiator principle, whereby hot burner gases divide and circulate around the upper radiator, overflow into the lower radiator when they again divide and circulate.

Features include removable cleanout covers for quick cleaning of the entire radiator, a safety relief with automatic venting of the top of the furnace. RGO models are automatic and furnished with a rubber-mounted blower, motor, filters, humidifier and draft control.

Quiet Burners
USE
LOVEJOY L-R FLEXIBLE COUPLINGS

Lovejoy Couplings provide a *quiet* coupling for fans, pumps, and blowers. No rattle! Rubber center unit increases flexibility, eliminates noise. Design assures maximum absorption of shock, vibration, starting torque and overloads; corrects for misalignment, surge and backlash. Installation in close quarters is easy. Phone, wire or write for Bulletin 530, containing full details and prices.

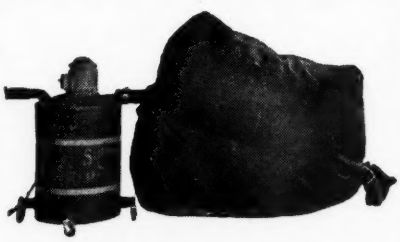
And Remember . . .

MOST FAN MANUFACTURERS SUPPLY BLOWERS WITH L-R JAWS ON BLOWER HUBS AT *NO* EXTRA COST!

LOVEJOY FLEXIBLE COUPLING CO.
5012 W. Lake Street Chicago 44, Ill.

Mfrs. of Lovejoy Flexible Couplings for all industrial services, Lovejoy Variable Speed Transmissions and Lovejoy Universal Joints.

This New SUPER Filter Bag



Makes Oil Burner Cleaning A Quick, Easy Job

Cleaning oil burners is no problem with the special bag which Super Red Streak engineers have designed for that purpose. The filtering action is provided without any clogging. There is no destructive back pressure. There are no limitations on Super Red Streak performance—it cleans them all—coal, oil, gas. Super chimney cleaning tools are standard equipment. There is a nominal extra charge for the new oil soot filter bag. Write for complete data. Try a Super 5 days free.

National Super Service Company, Inc.
1951 N. 12th St., Toledo 2, Ohio

National Super Service Company of Canada
Toronto, Ont. Vancouver, B.C.

It's Completely Automatic!

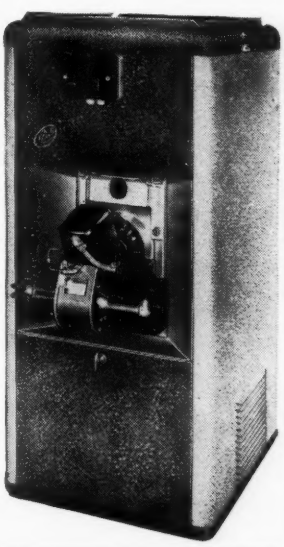
The New

RYBOLT

OIL-FIRED WINTER AIR CONDITIONER

● The many advantages of oil heat at its best are offered by this new Rybolt Oil-Fired Winter Air Conditioner. Completely automatic it provides unusual convenience, comfort and economy.

Once installed and set for the desired temperature the home owner is assured of even comfortable heat, as long as the unit receives ordinary care and attention. The burner is efficient, quiet, practically trouble-free and easy to service. Fully enclosed in an attractive cabinet, finished in two-tone baked enamel. Four sizes, BTU at the register, 85,000, 115,000, 150,000, 200,000.



RYBOLT HI-BOY OIL-FIRED WINTER AIR CONDITIONER

This unit unusually compact, is designed to meet the requirements of limited space. Its compactness is achieved by design and arrangement rather than to any material reduction in size of important working parts. Furnishes dependable automatic heating comfort and convenience.

Write for Details.

THE RYBOLT HEATER COMPANY

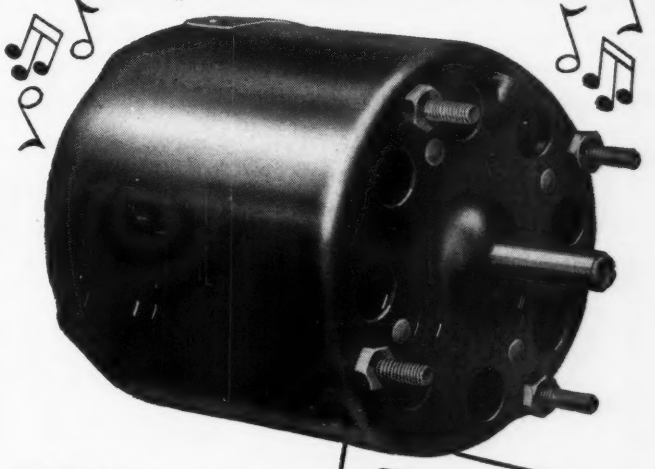
615 MILLER STREET • ASHLAND, OHIO

fuel oil & oil heat

FASCO

FRACTIONAL H. P. MOTORS

. . . Help *Revere* Capture Sound Perfectly



REVERE Camera Company, maker of famous REVERE 8mm and 16mm movie equipment, features tone perfection and important mechanical advantages in the REVERE Magnetic Tape Recorder. A high quality FASCO motor assures *quiet* operation . . . eliminates sound distortions caused by variation in speed. Tape starts and stops quickly . . . no reel coasting, no loss or slur of sound . . . fast rewind and forward speeds save time. All *real* advantages . . . examples of efficient, practical FASCO motor performance.

There's a complete line of FASCO Fractional H.P. shaded pole motors from 1/500 to ⅛ H.P. to help *you* improve your product, or pack maximum efficiency and economy into the design of your new one.

"Your comparison test, too, will prove FASCO best"

WRITE for complete information on FASCO Fractional H.P. Motors.

FASCO

INDUSTRIES, INC.

ROCHESTER 2, NEW YORK

"Split" Warm Air

(*Continued from page 55*)

with one large return grille in the living-room, and eliminating the individual returns from the bedrooms. This would require that occupants of the house leave the bedroom doors open when they did not open windows, or close the warm air outlets in the bedrooms when windows were opened and doors were closed.

It is estimated that about 30% of the heat in the living space is supplied by radiation from the warm floors, and about 70% is supplied by circulating warm air. Comfort is aided by the effect of warm floors at the base of outside walls. This tends to counteract the usual bodily radiation to the traditionally cold wall surfaces and increases the feeling of comfort.

One of the houses has been using continuous fan operation to keep air in the living space constantly moving. With the system the temperature difference between floor and ceiling has averaged no more than half a degree. In the other house the circulating fan has been operated intermittently in response to the thermostat and bonnet control. With this system a temperature difference as much as 1½° has been noted between floor and ceiling. On the basis of these experiments, the company is recommending that occupants keep the fan switch set to give continuous fan operation.

Total cost of the perimeter heating system in these houses is approximately $600, including the cost of encasing the feed lines and perimeter duct in concrete. This is in contract to an estimated $750 it would cost for a conventional forced warm air heating system.

The company is experimenting and improving the system as work progressing on the remaining houses planned for the development. Though emphasis is on comfort and satisfactory operation, the builders are interested in perfecting their technique and methods to cut everything feasible out of their costs.

STOP..... WASTE
WITH
HARVEY'S SOOT DESTROYER
GAS OR OIL

GOVERNMENT FIGURES REVEAL
1/8" LAYER OF SOOT CAUSES 35% FUEL LOSS

Destroy soot the easy way.
Harvey's Soot Destroyer gets gas or oil soot that a brush, scraper or vacuum hose never reaches. It follows through!

SAFEST TO USE

Harvey's Soot Destroyer is safe, slow burning, and will not flare up, yet destroys soot quickly and effectively. Recommended by leading boiler and furnace manufacturers. For best results use a soot gun.
Complete directions in every can.

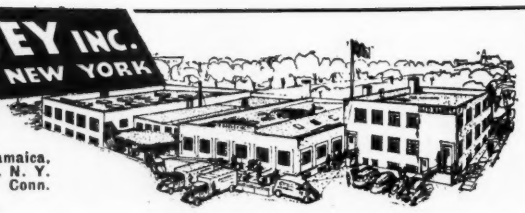
2 lbs. $1.25 each
$1.05 each per doz.
10 lbs. $5.60 each
$5.25 each per doz.
40 lbs. $20.00
75 lbs. $36.75

SOOT GUNS

DELUXE $1.50
STANDARD $.75

DISTRIBUTORS
in Principal Cities

SID HARVEY INC.
VALLEY STREAM, NEW YORK



BRANCHES: 138-76 Queens Blvd., Jamaica, N. Y. • 909 Main St., New Rochelle, N. Y. • 1823 Stratford Ave., Bridgeport, Conn.

1965: Looking Back

(*Continued from page 58*)

insisted upon treating service as the unwanted, troublesome stepchild of our main concern, the "sale" of oil, when, in fact, our ability, or lack of ability, to provide acceptable service is now, always has been and always will be, the ultimate measure of our hold upon our customers and our ability to increase their numbers.

Oilburner service is a package from which no part can be separated. Oil and service are bound together as surely as wetness is bound with water, as heat with a flame. We cannot continue to regard oil as the graceful swan of our profits and service as the ugly and troublesome duckling to be thrust aside as an unfit member of the family. Service can grow into a swan, too, if we will only let it instead of forcing it to remain a wobbly, ungainly creature which often inspires rage in our customers rather than the admiration which the industry so badly needs. Let us sell oilburner service, not oil. Sell the one successfully and the other follows out of natural association with it.

Our worthy competitor provides emergency service twenty-four hours of the day, three hundred and sixty-five days of the year, service performed by mechanics who function on a level of efficiency this industry does not begin

to match. Will you say that you cannot afford round-the-clock service? Can you afford anything less in a matter so vital to public confidence and esteem? Will you say that good oilburner mechanics are hard to find? You bet they are. It would be equally difficult to find people who could read and write if we made no provisions to train them.

We have it in our ability to maintain a system of procurement and training in the results of which we could take pride. It can be done. I believe we have got to do it in the face of competition which has built its success on just such methods. We cannot permit the continuation of a condition in which a single customer who burns fueloil is put in a position in which he cannot get heat because of lack of service at any time of day or night or because that service, when he does get it, is performed by a serviceman who is unfitted for his job only because we have done too little to prepare him for it.

That the larger suppliers may provide such service and that the smaller companies cannot is no answer. There is an acceptable means whereby every single user in the area can get good service within a reasonable time.

I have suggested that the home owner is happiest about his heating plant when he can ignore it. He is also, I believe, happiest about what he must spend to maintain it when the cost is charged to him in the least obtrusive way. By combining the cost of fuel with the cost of service in a single billing the gas company performed a master action in the delicate skill of public relations. We refer to it as "free service" and we chuckle and say that the public is paying for it any way. But I am convinced that the public prefers it that way and that the example already set for us is succeeding. We should follow it.

We are, all of us, suppliers and customers alike, familiar with the many types of service plans the industry offers. Heaven knows we should be. Every spring, last season's agreements are hauled out, argued over, rewritten again and again, repriced again and again. The customer, more than ever anxious to forget his heating plant now that the cold months are behind him, is faced again with the annual problem of choosing a service plan. To express it another way, he is confronted with another price tag on his heating plant. It would seem that he enjoys no relief from the pressure to spend more and more. He is actor as well as spectator in the annual rite of summer cleanup in which he is expected to play the part of target for a bombardment of exhortations to buy this, that and the other accessory. Admirable though the purpose of these sales efforts may be they are, nevertheless, a constant reminder that our customers must spend money to have comfortable homes. The fact of spending is inescapable but it need not be incessantly brought to the public's attention.

Some system of universal service recommends itself for another excellent reason other than that of causing the expense of heating to be less obvious to the public.

Salutary also would be the effect of universal service upon ourselves since we would happily be forced into drastic improvements in the efficiency of our service departments. Such improvements would result not only in increasing the economy of service operations

STOP... AFTER DRIP
WITH A
HARVEY SAFETY CUTOFF VALVE

USED ON ANY PRESSURE TYPE BURNER

Install on every job, new or old, as a *double* safety against oil dripping into combustion chamber after burner shuts off.

Install on "dripping" burners to insure safety until the fuel unit can be replaced.

ADDITIONAL FEATURES:

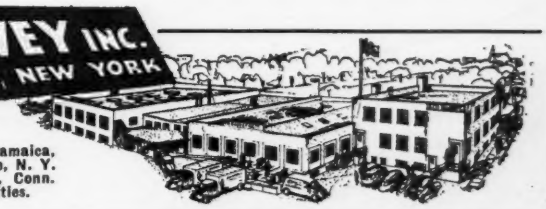
1. Reduce shut-off pulsations on job with critical draft conditions.
2. Eliminate soot of boiler shut-off.
3. Install at nozzle to eliminate drip caused by air in nozzle line.

SPECIFICATIONS:

2⅛" long, ¾" hex stock, ¼" F.P.T. each end, capacity 5½ g.p.h. Opens 83 lbs., closes 76 lbs. Special nozzle adaptor available for installing Safety Cut-off Valve in back of nozzle.

HARVEY CUT OFF VALVE—$3.25 each
$2.95 each per doz.
NOZZLE ADAPTOR—30c each

SID HARVEY INC.
VALLEY STREAM, NEW YORK



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QUICKLY AND EASILY INSTALLED - -

WRITE TODAY

REX RoTo Combustion Chambers

IN ANY STYLE FURNACE—WITH ANY MAKE BURNER

The user benefits through higher combustion efficiency and longer life. The installer through the easy and quick installations. No cutting or cementing necessary.

Instant COMBUSTION EFFICIENCY

Immediate SAVINGS

GET FULL INFORMATION

"NO BREAKAGE" PACKAGING

REX ROTO Combustion Chambers are individually packed in our exclusive TIME TESTED-CONSUMER APPROVED shipping container. It is designed to withstand numerous handlings.

REX RoTo CORP. 14400 DEXTER BLVD. DETROIT 6, MICHIGAN

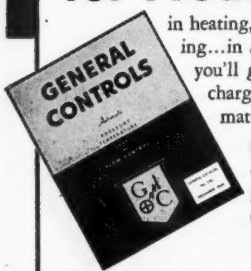
but also in greater customer satisfaction and that means and ever increasing body of users content to remain with this industry rather than go elsewhere for fuel. Long experience and study convince me that the two expressions, "good service" and "good customer relations," are precisely synonomous.

Another way in which we needlessly make operating expense obtrusive is the method chosen to call the user's attention to the presence of sludge and scale in his storage tank. Rather than do this indirectly and with some regard for public confidence, the tank cleaning companies are permitted to approach our customers and to offer to correct the condition at the customer's own expense. Once again the user is asked to spend some of his money and in this case to remedy a situation which arises, in part at least, out of the industry's own failure to provide fuel of maximum refinement. Tanks should be cleaned where individual cases require cleaning upon the recommendation of a competent serviceman or service engineer and I do not believe it to be unreasonable to suggest that we should assume the cost.

In giving your thoughtful attention to this catalog of our shortcomings in engineering, fuel, delivery and service, you may be curious to know what criticism I shall have to offer regarding our failings in our sales departments. Frankly, I have none to offer. If a just share of the equipment market is not now being enjoyed by this industry, we cannot place the blame on the failure of our salesmen to bring in the orders. Genuine confidence in the suitability of oilheat-

WHAT DO YOU WANT CONTROLLED?

for Product or Process...



in heating, refrigeration, aircraft or industrial processing...in *any* application where CONTROL is *vital*, you'll get better results with General Controls in charge. Whatever the *need*, for the best in automatic controls, it's General Controls.

FOR A BETTER ANSWER...to any control problem, check with General Controls first. Get this big, new catalog or see a General Controls specialist at any of our 21 Branch Offices.

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Manufacturers of Automatic Pressure, Temperature, Level & Flow Controls
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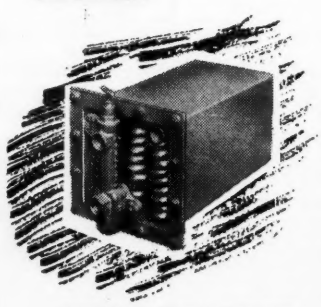
DISTRIBUTORS IN PRINCIPAL CITIES

"I Choose Yula"

"It means more money in my pocket when I install YULA. No servicing troubles—just clear profit and steady satisfaction because YULA products are the finest. Try them yourself!"

MIXING VALVE
For domestic use. Perfectly tempers hot water to any desired temperature at lowest cost.



C.H.M. RESIDENTIAL SHELL TANKLESS HEATERS
Can be used with steam or hot water heat. No separate by-pass for mixing valve. 75% hook-up savings.

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166 WEST 225 ST. • NEW YORK 63

ATTENTION: *Large Purchasers of Copper Tubing*

If you consume LARGE QUANTITIES of copper tubing, you will be interested in both the *quality* and *price* of the tubing we offer. Sizes ⅛" through ¾", coils or straight lengths, at extremely interesting prices.

We are a primary source, and can give assurance of a continuing supply.

We specialize in small diameter thin wall tubing.

KURT ORBAN COMPANY, Inc., 21 West Street, New York 6, N. Y. WH 4-7686

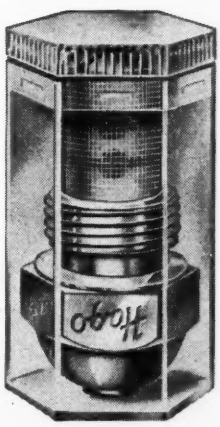
FOR BEST

PERFORMANCE

USE

HAGO

PRECISION NOZZLES



HAGO PRODUCTS

1281 SPRINGFIELD AVE., IRVINGTON 11, N. J.

5 REASONS WHY YOU SELL MORE.. PROFIT MORE.. with ANCHOR'S FUEL-MISER!

- **OUTSTANDING HOME-HEATING** *Even . . . constant . . . healthful*
- **AMAZING FUEL SAVINGS** *Saves up to 36% on fuel oil*
- **QUIET . . . MORE EFFICIENT** *High vacuum . . . extreme quietness*
- **ELECTRONIC FUEL CONTROL** *Eliminates danger of oil flooding*
- **PRE-WIRED AT FACTORY** *Eliminates wiring at time of installation.*

See this sensational oil burner in Space 619 at the NATIONAL OIL HEAT EXPOSITION, Commercial Museum, Philadelphia, April 24 thru 28.

WRITE today for complete details and descriptive literature on this modern oil burner. ANCHOR DIVISION, Dept. S.A., Stratton & Terstegge Co., Inc., P. O. Box 311, New Albany, Indiana.

Inquiries Invited From Boiler and Furnace Manufacturers

NEW FUEL-MISER **ANCHOR** OIL BURNER

Sundstrand

an oil burner for every heating job

- All Surfaces Machined
- Precision Made Throughout
- Completely Fire Tested
- Variable Tube Lengths To Fit YOUR Requirements
- Flange Mounted
- Meet All Local And State Requirements

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SUNDSTRAND ENGINEERING COMPANY

ROCKFORD ILLINOIS

NEW YORK TECH

America's Outstanding School of

OIL BURNER

INSTALLATION AND SERVICING

The School to Think of if:

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or

REQUIRE TRAINED SERVICEMEN

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NEW YORK TECHNICAL INSTITUTE

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Repco TRIPLE-PASS WINTER AIR CONDITIONER

COMPACT—Five individual heat exchangers with triple-pass construction.

Patent Pending

Write for full details about exclusive franchises for your territory on our full line of REPCO Winter Air Conditioners.

REPUBLIC PRODUCTS CO.

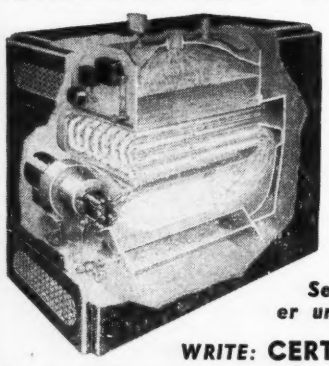
7420 STATE ROAD PHILADELPHIA 36, PA.

ing can be implanted in the minds of our prospects only by the adoption of an over-all planning and operational policy. Secure in the belief that his own company has united with the entire industry to equip him with the absolutely indispensable tool of wide public acceptance of every aspect of the business he serves, our salesmen will approach their task with immeasurably increased confidence and enthusiasm. They will be able to deal with their prospects on a realistic give-and-take basis and will not be burdened with the necessity of struggling with problems created by the very leaders who urge them to produce results which have become virtually impossible in the face of powerful competition and with the feeble backing of short-sighted management policies.

The bewilderment, frustration, impatience and insecurity felt by the members of our sales staffs find their counterparts in the feelings and attitudes of our employees in all other job classifications. Our people will not take pride in what they do, they will not do their best, so long as they have no feeling that they are participating, so long as they believe we are indifferent to their legitimate aspirations for security.

Human beings, heating equipment, fuel, service methods—these are the materials with which we work in our efforts to enjoy a return on our investment. And because we manipulate them in what is a coldly indifferent, off-hand manner, these materials remain cold. To fashion them in some clumsy semblance of order we are forced to hack away with hammer and chisel, when, indeed, a warm and melting concern for the

CERTIFIED Steel Boilers



W.B. SERIES: Scotch Marine Boilers of efficient three (3) pass design. Flame in fire-tube and built-in combustion chamber is completely surrounded by water. Wet base. Amazingly quiet operation. Home owners report 50% fuel savings. Sizes for all domestic, commercial and industrial applications.

Sell "Certified" efficiency boiler units and close sales easier!

WRITE: **CERTIFIED BOILER WORKS**

35 West 33rd Street New York, N. Y.

Looking for Results?

TRY KEK on that TOUGH JOB
GET ANY BOILER CLEAN

SAFELY and SURELY

TRY OUR OTHER QUALITY PRODUCTS TOO!

- KENBRIC Soot Remover Bricks and Rods
- KENITE Boiler Repair Permanent, Odorless
- KENITE Joint Compounds Non-Hardening
- KENITE Oil Pipe Plastic for Oil, Gas & Refrigerants

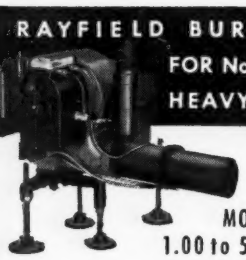
Ask Your Jobber or Order Direct. Jobbers Protected.

Write for FREE BULLETINS

KENITE LABORATORY

Madison New Jersey

RAYFIELD BURNERS FOR No. 4 or No. 5 HEAVY OILS



MODEL JR.
1.00 to 5.00 GALS./HR.
MODEL D4
3.00 to 12.00 GALS./HR.

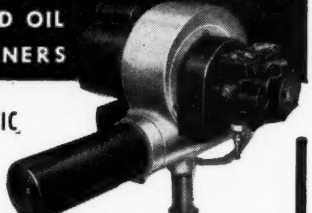
1. Fully Automatic
2. Self Cleaning Nozzle
3. Self Lubricating
4. All Electric Operation
5. Pays for itself from savings
6. Burns the cheaper No. 5 oil

RAYFIELD AUTOMATIC

HEAT RECLAIMERS

1. Low in Price—Automatic—Easy Installation
2. Installs on Boilers, Furnaces or Stoves
3. For use with Coal, Gas, Oil or Wood
4. Increases output of ANY gravity warm air furnace
5. Heats Basements, Play Rooms, Garages, etc.
6. The hotter the stack—the more heat reclaimed
7. Saves wasted heat now going up the chimney

RAYFIELD—SHELL COMBUSTION HEAD OIL BURNERS



for CATALYTIC OILS TO #3 GRADE
2 MODELS
1.00 to 3.00 GALS./HR. CAPACITY

1. Shell Head Economy 12 to 15% CO_2
2. Clean boilers with perfected combustion
3. Burns Catalytic oils easily
4. Quiet—No Vibration or pulsation
5. Cuts user's oil bills 14 to 36%
6. The ideal replacement oil burner

C. L. RAYFIELD COMPANY • 2010-18 SO. HALSTED ST. • CHICAGO 8, ILL.

KLEENMASTER Makes Servicing Profitable

Eliminate your service loss on oil accounts. Kleenmaster grosses $7.00 per customer after selling expense and labor.

Keep your Drivers and Servicemen busy during the summer slack.

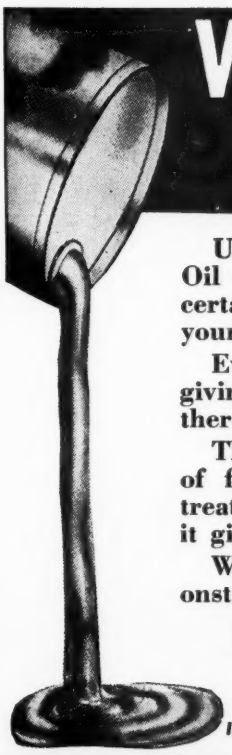
The "Big Bag" with your name in large type gives you "Billboard and Soundtruck" advertising.

Write for details including
Sales Manual and Profit Analysis

MOLLOY MACHINE CORPORATION

3445 N. Western Ave.
CHICAGO 18, ILL.

WASTE LESS FUEL OIL



Use Alken-Certified Even-Flo Fuel Oil Conditioner in your oil and be certain of obtaining the most for your money.

Even-Flo improves atomization, giving more complete combustion, thereby reducing soot deposit.

That over *1,000,000,000* gallons of fuel oil have been successfully treated with Even-Flo is proof that it gives "TOPS" in results.

Write for booklet and *FREE* demonstration in your fuel oil.

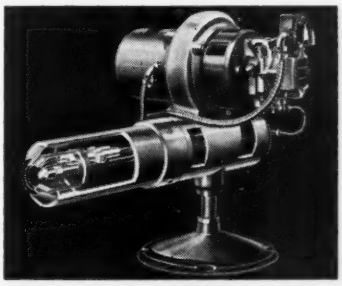
ALKEN-MURRAY CORP.
131 E. 23rd St.
New York 10, N. Y.
Individual Water Treatments—Soot Removers

Certified Alken
EVEN-FLO
FUEL OIL CONDITIONER

NOW AUTOMATIC HEAT *plus* ECONOMY

In Autocrat Oil Burners

This patented combustion head has dealer and consumer acceptance. When you show your customer savings year after year, he listens.



Model HB1-S

AUTOCRAT
Manufactured by
CHANDLER COMPANY
CEDAR RAPIDS, IOWA

GUESS WHAT? SMITTY'S BACK!

Good news for Old Timers and other dealers on the prowl for profits! Earl K. Smith has re-entered the heating field with the complete, 28-year proven line of famous quality Hart Oil Burners—plus a complete line of dependable oil or gas-fired furnaces and boilers. Use the coupon to get the latest on advanced Hart Heat . . . now guided by the exceptional engineering skill of Earl Smith. Do it now!

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OIL BURNERS, OIL AND GAS FURNACES, BOILERS

HART HEAT DIVISION
Avery Farm Machinery Co.
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LOSSES due to inaccuracies in meters and tanks can be prevented by having your fueloil meters, tank trucks, and bulk storage tanks accurately calibrated.

Small daily losses, when multiplied by a year's operation, can cost you hundreds of dollars annually. Our calibration service safeguards you against these unseen leaks in your profits. The cost is paid for many times over in fuel savings.

There are more than 50 Saybolt offices to serve you in the United States and foreign ports. Your request will bring complete information.

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part they all play would permit us instead to mold them into a single, perfectly knit, effective weapon with which, and only with which, we can wage our struggle with success.

This mold can only be fashioned from a concept. And this concept must have its origin in the leadership of our industry. This concept will be all-embracing; it will look upon the industry as a whole and upon all of its parts as its field for inquiry, for decision, for action; inquiry, decision, action will be dynamic and continuous; the sustaining concept which will make them fruitful will be constantly before the minds of those who will formulate it. Our leaders must not only create an ideal standard to which we will subscribe but must also remain vigilant that in its practical applications this ideal will be followed in all we do so that we may begin, now, at long last, to discharge our responsibilities to our public and to ourselves and to abandon make-shift policies in whose toils we have been strangling.

The proposals made for the conduct of our affairs do not constitute a detailed blueprint for action but such a blueprint is needed. It can be drawn, I believe, only under the direction of those who are placed at the very top, who have ventured to risk their substance in this industry. If our people on the management level receive from our leaders the inspiration and supervision which our leaders must offer, a workable plan can emerge. Our problems are tough, to solve them will be tough.

Our leadership needs to engage in the kind of soul-searching that will result in a new, vital way of thinking about

For More Profitable Jobs

NU-TROJAN Combustion Chambers

A Product of McLeod & Henry Co., Inc.

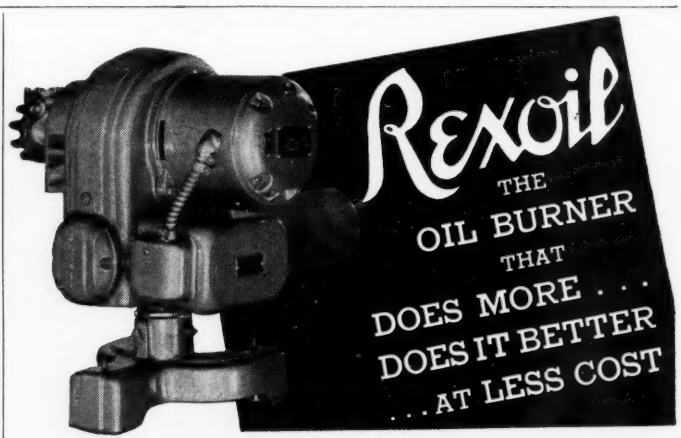
Nu-Trojan Chambers have the features that lower installation costs and reduce servicing costs to help you secure profitable jobs. Has few parts, does not need steel bands to hold them in place. First quality "Steel Mixture" Pennsylvania fire clay. Fusing point 3180° F. Write Dept. 61 for details.

A. R. WEBBER CO., INC.

DEPT. 61

NEW HAVEN 11, CONN.

EVERYTHING FOR THE OIL BURNER TRADE



REIF-REXOIL, Inc. 37 Carroll St., Buffalo, N. Y.

Mfgrs. of Oil Burners, Boilers, Furnaces

UNDERWRITERS' APPROVED

SHALLO-WELL

OIL-FIRED FLOOR FURNACES

ONLY **34** INCHES DEEP

BTU CAPACITIES OF

★ 50,000 ★ 65,000 ★ 75,000

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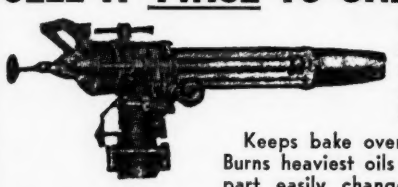
SELL IT TWICE TO ONE CUSTOMER



SIMPLEX PNEUMATIC TURBINE TYPE HEAVY OIL BURNERS

• ***Many bakers will use two of these burners—one for the boiler plant, one for the bake oven.***

Keeps bake oven heat absolutely even. Burns heaviest oils cleanly — one moving part easily changed — withdraws from combustion chamber for easy inspection.

Multiple installations mean multiple profits. Find out how you can be THE dealer in your territory to sell SIMPLEX heavy oil burners.

SIMPLEX OIL BURNING SYSTEMS

SINCE 1910

SIMPLEX OIL HEATING CORP.

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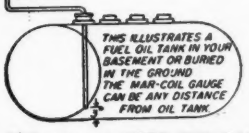
•• MAR-COIL HEATER COMPANY ••

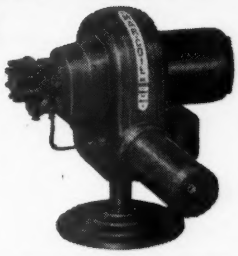
200 PATERSON PLANK ROAD — UNION CITY, N. J.

MAR-COIL DISTANT READING FUEL OIL TANK GAUGE

For inside or outside jobs. Installed at any height or distance. Specify size of tank and length of copper tubing when ordering.



THIS ILLUSTRATES A FUEL OIL TANK IN YOUR BASEMENT OR BURIED IN THE GROUND. THE MAR-COIL GAUGE CAN BE ANY DISTANCE FROM OIL TANK.

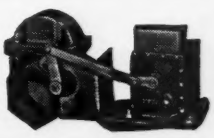


MAR-COIL OIL BURNER
A dependable and popular unit. Made in 5 sizes from 1 to 25 gals. per hour. No. 12 and 12B with dual ignition.

MAR-COIL RIGID BOILER STAND
Simply and quickly assembled. Can be set up at any height. No bottom obstruction. Eight sizes to fit 12" to 54" boiler dia.

MAR-COIL TEMPERING VALVE
Regulates temperature of hot water by thermostatic bellows. Sizes ¾" to 2".

MAR-COIL MOTORIZED GATE VALVE
Used with any steam, water or vapor job. Sizes 1½" to 6".



MAR-COIL SILENCER
Eliminates water hammer from the lines on every job. Easily installed. No adjustment required.
Type A, 9 cu. in. cushion
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GORTON VALVES

FAST VENTING
THE SOLUTION TO STEAM
HEATING PROBLEMS

Write today for complete information and prices.

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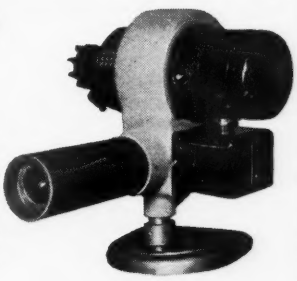
Since 1887 — Manufacturers of Heating Equipment
CRANFORD — *NEW JERSEY*

HOW TO STOP FUEL WASTE



Imagine a bunsen burner with no central air-hole or a stoker without air driven to the center of the fuel bed.

Only Airflame provides means to drive air into the CENTER of the oil mist ball. Less waste. More Heat.

Dealers, Distributors, Mfg. Agents write

AIRFLAME, INCORPORATED
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SUBSTANTIAL PROFITS *for* YOU—

Cleaning Furnaces with the GRAND RAPIDS *De Luxe* FURNACE CLEANER

You can put furnace cleaning on a money making basis by using a Grand Rapids Furnace Cleaner. High velocity suction scoops up all deposits of soot, ashes and carbon, cleaning the heating plant and re-establishing full efficiency. Special attachments clean flues, radiators, right angle turns and other hard-to-reach areas. The job is done quickly and completely. Customers are highly satisfied.

The Grand Rapids DeLuxe Furnace Cleaner is also your "in" for more than cleaning profits. By checking over and inspecting the heating plant as you clean it you are in a position to make timely recommendations for new equipment or repairs. This means better service for customers . . . more profits for you.

Write for complete information and prices today.

DOYLE VACUUM CLEANER CO.

233 Stevens St., S.W. — Grand Rapids 7, Mich.

E-Z Soot Destroyer

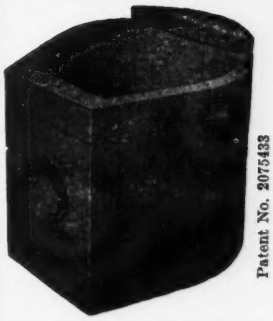
(for Fuel Oil Soot only)

One application does a thorough soot cleaning job. Keep a supply on every Service Truck. Many extra cleaning jobs can be sold—and the profit is very substantial. Stock the 1-lb. cans for resale. If your Distributor cannot supply you, write direct.

No. 1 Pkg. approx. 1 lb. . . . List $1.00 ea.
No. 5 Pkg. approx. 5 lbs. . . List $4.50 ea.
Special discount to Distributors on quantities.

HEALY-RUFF Company
797 Hampden Avenue, St. Paul 4, Minn.

QUICK HEAT UP



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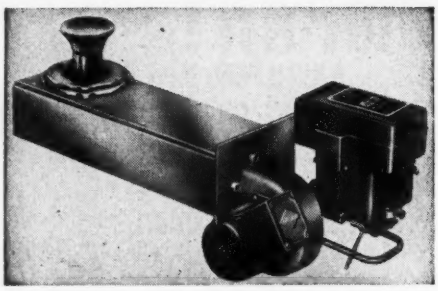
COMBUSTION CHAMBERS
SOLD BY
LEADING JOBBERS
NATIONALLY

Patent No. 2075433

Write for our new Catalog which contains complete information and specifications on Combustion Chambers.

MONOGRAM PRODUCTS CO., INC.
PHILADELPHIA 4, PA.



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THE BURNER FOR LOWEST COST HEATING!

Look for the

KRES-KNO *Ball Flame*

VAPORIZING OIL BURNER

Low Initial Cost • Completely Automatic
Economical • Trouble-Free • Underwriters' Lab. Listed

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PALISADES PARK, N. J.
Kresno-Stamm Manufacturing Co., (Canada) Ltd.
1452 Drummond St., Montreal 25, P.Q. — Factory: Granby, P.Q.

our problems, which are, in the last analysis, only one problem, one single stumbling block over which we have fallen. That problem is poor public relations. We can have good public relations or we can have poor public relations. Or, to put it another way, we can stay in business or we can put ourselves out of business. Today the choice is ours. Tomorrow we may have no choice. The existence and example of a formidable competitor in the gas company should cease to be objects of our frustrations and become rather a challenge to bring out the very best in us all.

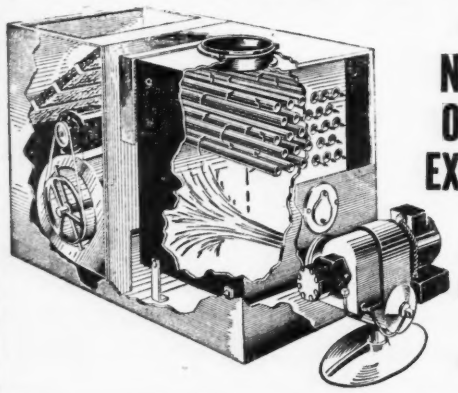
A new concept of thought and action —ever seeking perfection, sustaining and supporting each individual company, sustaining and supporting the industry as a whole—this and only this, is the key to a door which opens onto the broad avenue where we can march together in the warm sunshine of public esteem, where there is room for all, ourselves and our competition alike.

1965 can be either the nightmare become real with which I began or it can mark another milestone in healthy progress. Here, now, we have it in our power to decide which it shall be. So, off with the silken garments of complacency which may hide but not erase our fears, and on with the hair shirt—and let's get down to work.

◈

Myron R. Holmgren, president, announces the removal of River States Oil Co. to 524 Davis St., Evanston, Ill. Originally located in Chicago, the firm was organized last June to conduct a general marketing operation in fueloils.

SEE TURB-O-TUBE



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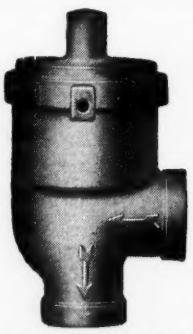
IGNITION CONNECTIONS
Made in Two Styles
CRIMP TYPE and SOLDERLESS

Code No. C/T #11 **Code No. S-SOS #11**

THE RAJAH CO. BLOOMFIELD, NEW JERSEY



PREFERRED Anti-Syphon Valves

APPROVED BY UNDERWRITERS' LABORATORIES, INC.

For Oils Up To No. 5—Valves C5 and C10 are available in ⅜" and ½" sizes.
For Oils Up To and Including No. 5—Valves B5 and B10 are available in ¾" and 1" sizes. (1" size is built up from ¾" size with fittings.)

Permits pumping of oil but closes to prevent syphoning in case of suction line break.

PR-173

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